

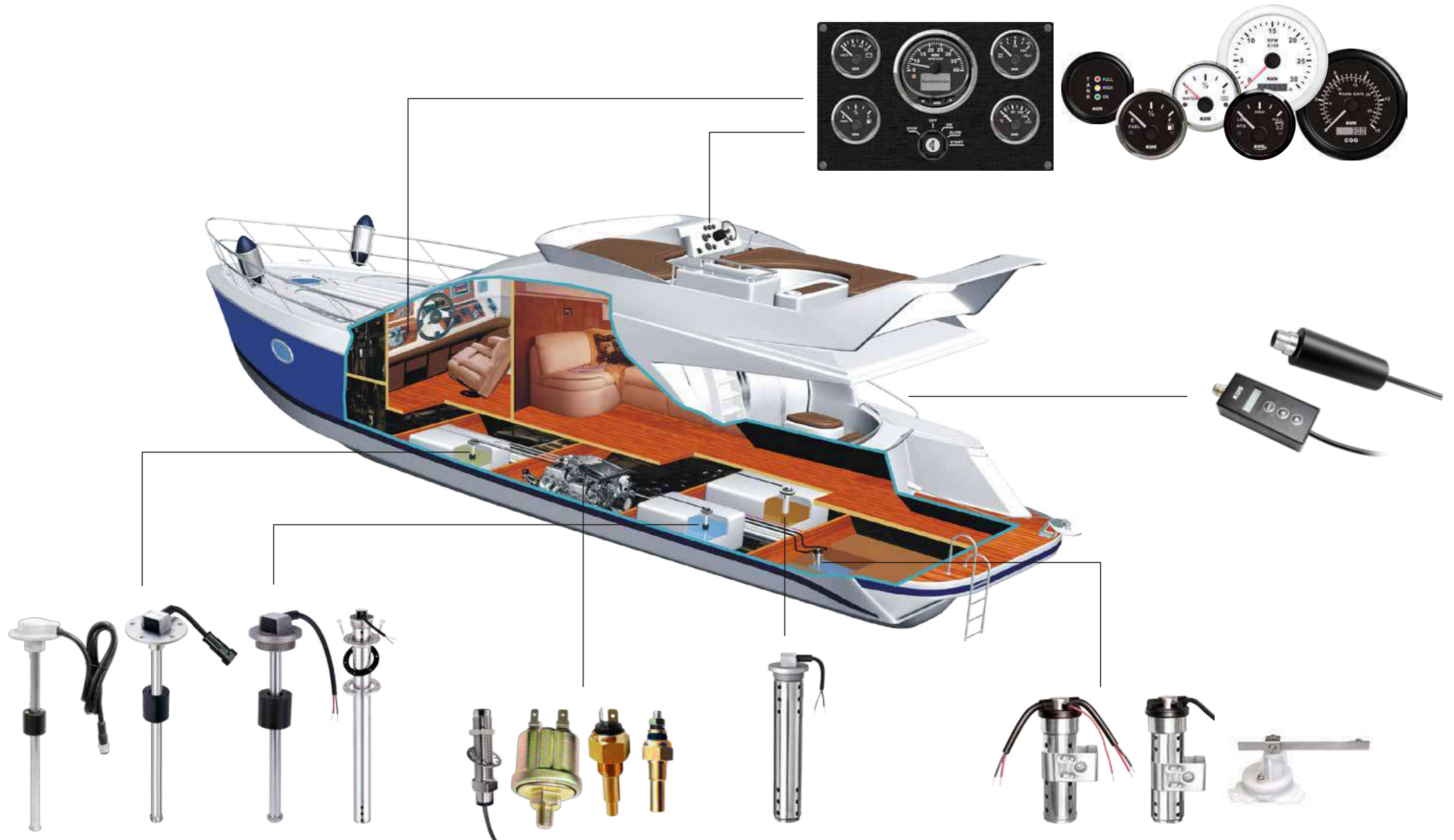
A woman wearing a large black sun hat and sunglasses is driving a white motorboat on a blue lake. The boat has a steering wheel and a dashboard. The background shows a clear blue sky and a forested shoreline in the distance.

**KUS**

[www.kusauto.com](http://www.kusauto.com)  
Since 1984

**MARINE**  
Products Catalogue

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ISO/TS 16949    ISO9001    ISO14001    AD 2000 W0    PED 97/23 CE    CE

The history of Zhengyang Electronic Mechanical Ltd. traces back to 1984. The company was established in Taiwan, and moved to Guangdong province Dongguan city in 2003.

- **Product Range:**  
Tank level sensors, temperature and pressure sensors, urea sensors, etc.  
Gauges for fuel/water level, engine monitoring.
- **Facilities:**  
At the end of 2008 ZEM's new 75,000m<sup>2</sup> plant was put into operation. The new plant has an integrated laboratory and is capable of stamping, injection, CNC, die-casting, die making, tube manufacturing, forming, bending, and welding.
- **Certificates:** IATF 16949, ISO 9001, ISO 14001, TÜV PED+AD2000 and CE certification, etc.
- **Our Customers Include :**  
Bayliner, SeaRay, Hallberg Rassy, Moeller etc. yachts and accessories companies.  
Cummins, SWT, Powerlink, Himoina, Zings, MPMC etc. power genset manufacturers.  
Volvo, Mercedes-Benz, Iveco, MAN, Nissan, Renault, Scania etc. vehicle companies.
- **Development:**  
KUS has many years of experience in developing and manufacturing mechanical and electronic parts for vehicles, especially level sensors and gauges. We have a strong design team of more than 200 professional engineers who are always ready to offer the best solution for your vehicles and yachts.

## KUS

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KUS is renowned for its 30 years of experience in the global marine instruments market. KUS exports its products worldwide, mostly to Europe and United States.

All of KUS's gauges have received the CE mark and meet the criteria of the strictest testing standards for vibration, environmental, pressure, etc.



Light guiding needle    Reinforced anti-fog lens  
Panel    Main body  
Bezel    PCBA

All the gauges can be classified into two types: 52mm (2") and 85mm (3 3/8"). As per its operating principle, Zheng Yang gauge can be classified into cross coil, stepper motor, LCD & LED types. We recommend the cross coil type except for tachometers and speedometers.

According to your waterproof requirements, you can choose Zhengyang gauges with completely waterproof function, or with semi-waterproof function. Both body plates are waterproof, and the SeaV series gauges can even work in the water.

The color of the panel can be black or white; the color of the needle can be white or red. Our default color combinations are red needle to white panel or white needle to black panel. The lens had undergone anti-fog treatment and been reinforced for strength. One can choose between curved or flat lens, and choose between red or yellow backlight.



KUS utilizes advanced techniques and equipments in the production of the gauges. This assures our gauges' superior qualities and long service lives.



# Manufacturing

# Laboratory Validation



Wave soldering production line



Antistatic workshop



Plastic injection

Through decades of development and continuous investments in manufacturing, KUS has built a wide range of comprehensive production processes and equipment. KUS production processes are vertically integrated, and in-house capabilities range from raw material processing to final assembly. KUS capabilities include German TÜV validated tube-forming lines, plastic injection, CNC, furnace brazing and annealing line, automatic SMT, and automatic wave soldering. More than 95% of key components are made in-house. This ensures product quality and adaptability to project schedules communicated by customers. KUS is the one stop turnkey solution for customer requirements.

### Quality Assurance

- High quality aluminum, plastic, and stainless steel material.

### Price Assurance

- Product accessories such as tubes, machining parts, etc are manufactured in-house.

### Delivery assurance

- Systematic management, and progressive assembly line provide the flexibility for quick product change over.

The KUS facility consists of 15 manufacturing workshops. Advanced processes and strict quality system ensure the quality and performance of our sensors and gauges. All products are tested for functionality under extreme environment conditions.

KUS is equipped with a fully functional tooling facility with 150 design and manufacturing employees. The majority of our production tooling for processes such as the ones used in plastic injection molding, stamping, die-casting, rubber molding, etc., are designed and manufactured in-house. This in-house capability means that KUS can produce rapid-prototypes with flexible development schedules to meet customer's new project requirements.



Pipe forming



CNC machining



Urea Sensor Production Line



Durability lab



Vibration lab



Aging & Salt Spray Test

KUS technology center is experienced in performing tests and validations. Ranging from initial product research and development to full product life validation according to international testing standards, KUS validation capabilities include :

- Design structure validation
- Electric performance testing
- Mechanical performance testing
- Low/high temp simulation testing
- Salt spray testing
- Sine/random vibration testing
- Metal material elemental analysis
- Metallurgical analysis
- Intergranular corrosion analysis

The KUS technology center was setup in 2007 spanning 1600 square meters, the facility includes:

- Vibration lab
- Electronics lab
- Aging lab
- Durability lab
- Mechanics lab
- Chemical lab
- Measurement center

KUS leads the sensing industry through research, innovation, and consistent high quality products. Since inception, KUS strives on its core policy on quality, management, and innovation. New product design are validated through a series of rigorous tests and strict process controls.

- Each batch of raw material is tested in our laboratory to ensure the material meets the high quality standards of KUS products.
- Engineering support throughout manufacturing process guarantees the reliability and stability of KUS products.
- Multi-dimensional validation throughout new product development ensures product performance in harsh environments.
- The successful market positioning is continued through strong employee awareness of product quality and processes.



Measurement center



Electronics lab



Quick chemical analysis



KMG Series

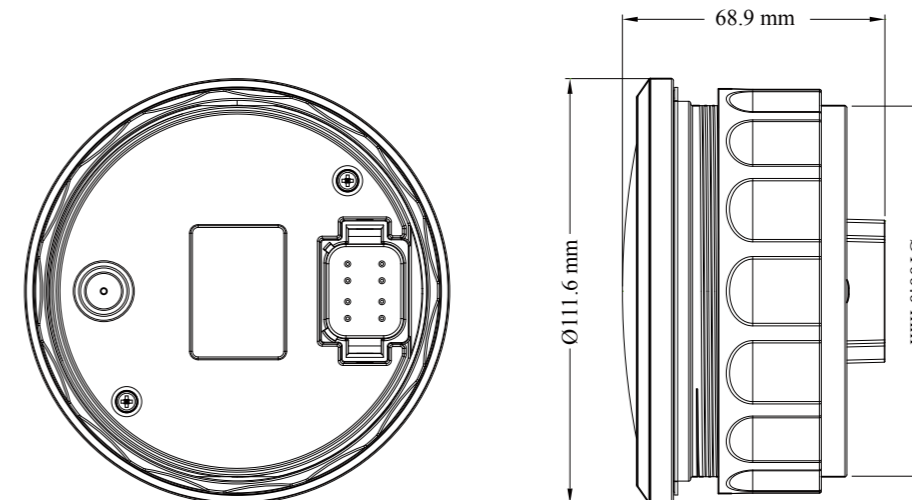


## Key Features

- ◆ Two display styles option:
  - Model 1: RPM(3K~8K), Fuel level, Engine temperature, Oil pressure, Engine work hours ;
  - Model 2: RPM(3K~8K), Fuel level, Engine temperature, Oil pressure, Engine work hours ;
- ◆ Compatible with J1939 & NMEA2000, and supporting 4 different of Analog signals input ( Tacho sensor, Fuel, Water temperature and Oil pressure sensor ) ;
- ◆ For NMEA2000, the instance number need to be set up on the KMG ;
- ◆ For Analog signal, optional scope can be set up by customer ;
  1. Fuel level ( 0~190ohm or 240~33ohm) ;
  2. Oil pressure ( 10~185ohm or customized) ;
  3. Water temperature ( 301~23ohm or customized) ;
  4. Speed ratio: (0.5-250.0) ;
- ◆ Alarm function : Fuel (10%), Water temperature (95°C), Oil pressure (0.7bar), can be customized ;
- ◆ Backlight Brightness: 10%~100% ;
- ◆ IP67 protection rating ;
- ◆ Enjoy faster speed to start-up, Low power consumption, high frequency.

## Product Specification

- ◆ Model: KMG
- ◆ Art No.: JKE00520
- ◆ Dimension: 3.0 inches
- ◆ Mounting Dimension: 100mm
- ◆ Working Voltage: 9-32V DC
- ◆ Working Current: ≤170mA(12V)
- ◆ Resolution: 432x432 pixels
- ◆ Operation Method: Front Button (Up-Model-Down, 3 buttons to set up the function)
- ◆ Working Temperature: -30°C~+85°C
- ◆ Storage Temperature: -30°C~+85°C
- ◆ Accessories: 1M 5 cores CAN cable, 1M 6 cores Analog cable, manual.



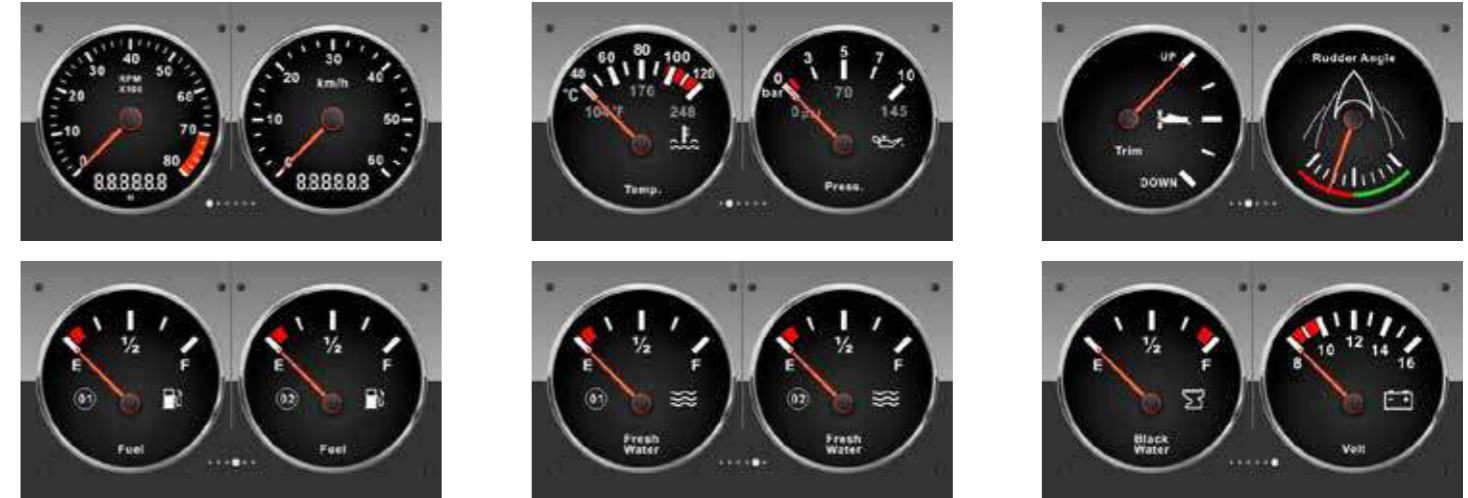


## KMB-43 Series

The KUS KMB is an Integrated Data Monitor with an advanced TFT (Thin Film Transistor) screen. The unit is compatible with J1939 and NMEA 2000 systems. The KMB displays real time network information including engine output, fluid levels, and speed. KUS can also customize the unit to meet customer requirements. The KMB is a perfect fit for marine applications that monitor information over the J1939 or NMEA 2000 network.



### Display Modes



### Monitoring Data

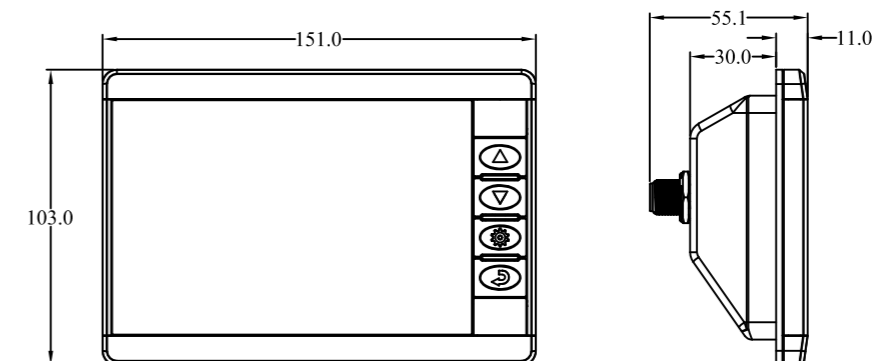
- ◆ **Engine** : Speed, Trim, Coolant Water Temperature, Oil Pressure, Hours
- ◆ **Navigation**: Course Over Ground(COG), Speed Over Ground(SOG)
- ◆ **Fluid Management**: Fuel Level, Fresh Water Level, Black Water Level
- ◆ **Rudder Position** and **Battery Voltage**

### Specification

- ◆ Model: KMB-43
- ◆ Art No.: JKE00333
- ◆ Dimension: 4.3 inches
- ◆ Resolution: 480x272 pixels
- ◆ Operation Voltage: 9-32V DC
- ◆ Operation Current : 300mA (12V)
- ◆ Operation Temp.: -20°C ~ +70°C(Touch screen: -20°C ~ +60°C)
- ◆ Cable Accessories: Standard equipped with 1m length cable 0.5M/2M/4.5M/10M

### Key Features

- ◆ 32-bit Cortex-M3 core + high-speed FPGA framework ;
- ◆ Fast start-up speed ;
- ◆ An easy to use and switchable interface that supports multiple languages ;
- ◆ A bright high-resolution screen display that can be seen in direct sunlight ;
- ◆ Compatible with J1939 & NMEA2000 including KUS Sea N series products .





## KMB-70 Series

The KUS KMB is an Integrated Data Monitor with an advanced TFT (Thin Film Transistor) screen. The unit is compatible with J1939 and NMEA 2000 systems. The KMB displays real time network information including engine output, fluid levels, and speed. KUS can also customize the unit to meet customer requirements. The KMB is a perfect fit for marine applications that monitor information over the J1939 or NMEA 2000 network.



**KMB**  
IP67

# Integrated Data Monitor



### Display Modes



### Monitoring Data

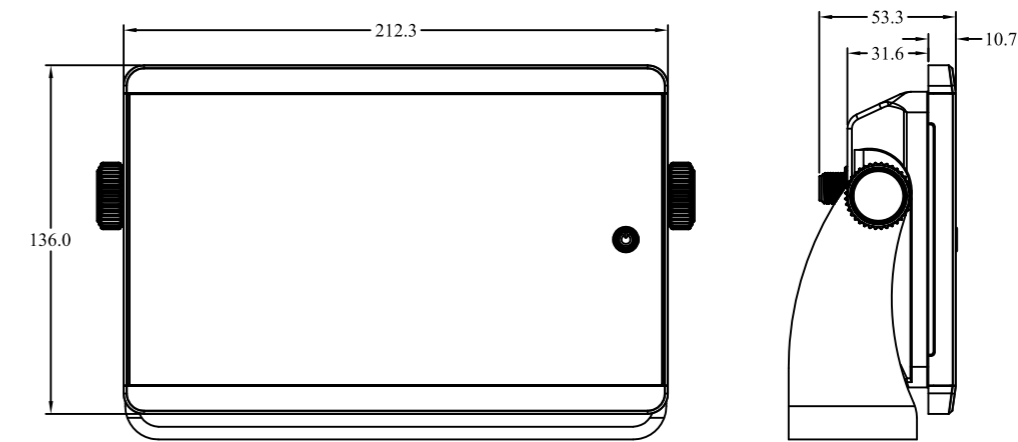
- ◆ **Engine** : Speed, Trim, Coolant Water Temperature, Oil Pressure, Hours
- ◆ **Navigation**: Course Over Ground(COG), Speed Over Ground(SOG)
- ◆ **Fluid Management**: Fuel Level, Fresh Water Level, Black Water Level
- ◆ **Rudder Position and Battery Voltage**

### Specification

- ◆ Model: KMB-70
- ◆ Art No.: JKE00334
- ◆ Dimension: 7.0 inches
- ◆ Resolution: 800x480 pixels
- ◆ Operation Voltage: 9-32V DC
- ◆ Operation Current: 400mA (12V)
- ◆ Operation Temp.: -20°C ~ +70°C(Touch screen: -20°C ~ +60°C)
- ◆ Cable Accessories: Standard equipped with 1m length cable 0.5M/2M/4.5M/10M

### Key Features

- ◆ 32-bit Cortex-M3 core + high-speed FPGA framework ;
- ◆ Fast start-up speed ;
- ◆ An easy to use and switchable interface that supports multiple languages and datas ;
- ◆ A bright high-resolution touch screen display that can be seen in direct sunlight ;
- ◆ Compatible with J1939 & NMEA2000 including KUS Sea N series products .





The Sea N Series consists of 8 analog instrumentations that are connected to the NMEA 2000&J1939 network:

- Fuel Level Gauge
- Water Level Gauge
- Holding Tank Level Gauge
- Voltmeter
- Water Temperature Gauge
- Oil pressure Gauge
- Speedometer
- Tachometer

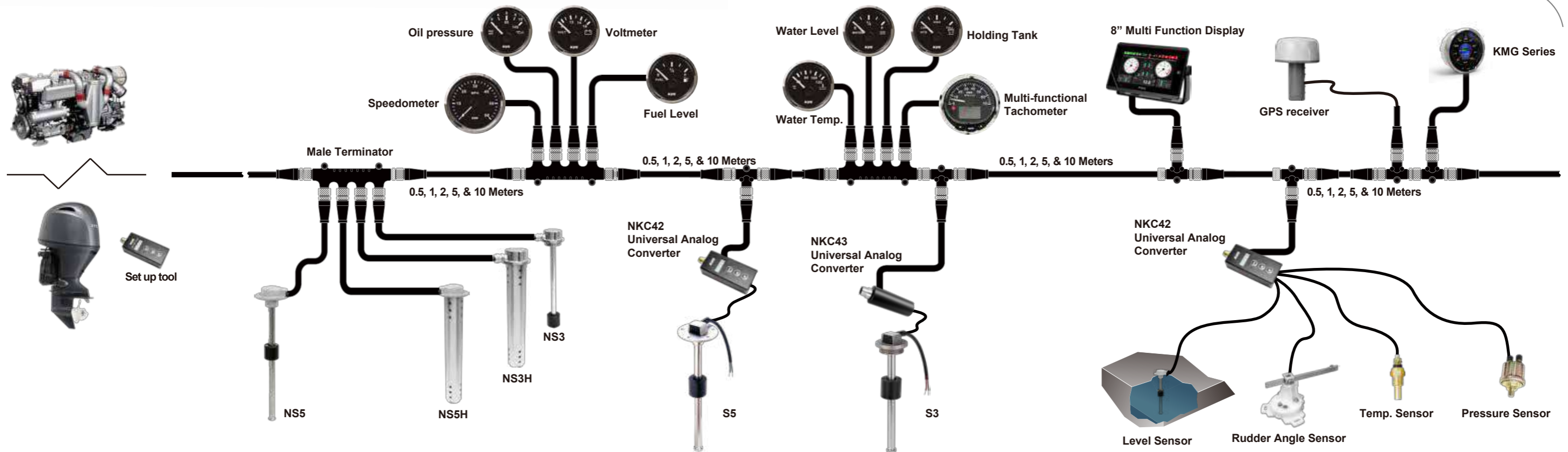
In addition to providing analog RPM display, the Sea N Tachometer also includes a LCD screen that monitors real time performance data such as:

- Engine Trim
- Battery Status
- Engine Temperature
- Engine Hour
- Oil Pressure
- Fuel Consumption
- Alarm



### Features:



- NMEA2000 and J1939 Compatible ;
- LCD displays all available data and alarms on NMEA2000 and J1939 engines ;
- Tachometer, Speedo and all 2" gauges data from the CANbus ;
- KEY engine parameters supported ;
- Double layer reinforced anti-fogging glass ;
- Red background light; blue background light can be customized ;
- IP67 Waterproof ;
- Fully sunlight readable display ;
- Plug and play connectors .



## NMEA 2000/J1939 Network Integration System







# Sea N Series



| FUEL LEVEL  |         |                  |                          |   |               |                 |                        |
|---|---------|------------------|--------------------------|---|---------------|-----------------|------------------------|
|  |         |                  |                          |  |               |                 |                        |
| Art. No.  | Model   | Signal           | Picture Indicating       | Bezel   | Display Range | Working Voltage | Installation Dimension |
| KN00001   | NMFR-BS | NMEA2000 & J1939 | <input type="checkbox"/> | SS 316  | Empty-Full    | 12V/24V         | Φ52mm                  |
| KN00200   | NMFR-WS |                  | <input type="checkbox"/> |   |               |                 |                        |

| OIL PRESSURE  |              |                  |                          |   |               |                 |                        |
|---|--------------|------------------|--------------------------|---|---------------|-----------------|------------------------|
|  |              |                  |                          |  |               |                 |                        |
| Art. No.  | Model        | Signal           | Picture Indicating       | Bezel   | Display Range | Working Voltage | Installation Dimension |
| KN05000   | NMPR-BS-0-10 | NMEA2000 & J1939 | <input type="checkbox"/> | SS 316  | 0~10bar       | 12V/24V         | Φ52mm                  |
| KN05100   | NMPR-WS-0-10 |                  | <input type="checkbox"/> |   |               |                 |                        |

| WATER LEVEL  |         |                  |                          |  |               |                 |                        |
|--|---------|------------------|--------------------------|--|---------------|-----------------|------------------------|
|  |         |                  |                          |  |               |                 |                        |
| Art. No.   | Model   | Signal           | Picture Indicating       | Bezel  | Display Range | Working Voltage | Installation Dimension |
| KN01000  | NMWR-BS | NMEA2000 & J1939 | <input type="checkbox"/> | SS 316   | Empty-Full    | 12V/24V         | Φ52mm                  |
| KN01100  | NMWR-WS |                  | <input type="checkbox"/> |  |               |                 |                        |

| VOLTMETER  |              |                  |                          |  |               |                 |                        |
|--|--------------|------------------|--------------------------|--|---------------|-----------------|------------------------|
|  |              |                  |                          |  |               |                 |                        |
| Art. No.   | Model        | Signal           | Picture Indicating       | Bezel  | Display Range | Working Voltage | Installation Dimension |
| KN03000  | NMVR-BS-8-16 | NMEA2000 & J1939 | <input type="checkbox"/> | SS 316   | 8~16V         | 12V/24V         | Φ52mm                  |
| KN03100  | NMVR-WS-8-16 |                  | <input type="checkbox"/> |  |               |                 |                        |

| TACHOMETER  |             |   |                          |  |               |                 |                        |
|---|-------------|---|--------------------------|--|---------------|-----------------|------------------------|
|  |             |   |                          |  |               |                 |                        |
| Art. No.  | Model       | Parameters Supported  | Picture Indicating       | Bezel  | Display Range | Working Voltage | Installation Dimension |
| KN07000   | NMHB-BS-7KL | Engine RPM/<br>Coolant temperature/<br>Engine Hours/<br>Oil pressure/<br>Trim/Fuel rate/<br>Fuel Tank1, Tank2, Tank3, Tank4 | <input type="checkbox"/> | SS 316   | 0~7000rpm     | 12V/24V         | Φ85mm                  |
| KN07100   | NMHB-WS-7KL |   | <input type="checkbox"/> |  |               |                 |                        |

| SPEEDOMETER   |            |                  |                          |   |               |                 |                        |
|---|------------|------------------|--------------------------|---|---------------|-----------------|------------------------|
|  |            |                  |                          |  |               |                 |                        |
| Art. No.  | Model      | Signal           | Picture Indicating       | Bezel   | Display Range | Working Voltage | Installation Dimension |
| KN08000   | NMOB-BS-60 | NMEA2000 & J1939 | <input type="checkbox"/> | SS 316  | 0~60MPH       | 12V/24V         | Φ85mm                  |
| KN08100   | NMOB-WS-60 |                  | <input type="checkbox"/> |   |               |                 |                        |





## NKC42/NKC43 Universal Analog Convertor

- NKC series attaches directly into J1939 and NMEA2000 networks of compatible engines, transmissions, and gen-sets and converts the resistance signals to the NMEA 2000 or J1939 CAN bus data.
- IP67 Waterproof standard.
- J1939 & NMEA2000 output for use with other onboard device.
- NKC series can be used to get engine data, tank levels, alarm status, generic pressure and temperature indications from any resistive sensors.

| Product Name          | NKC42 4 Channels Convertor      | NKC43 Convertor   |
|-----------------------|---------------------------------|---|
| Item No.              | JKE00233                        | 1 Channel JX200066(0-190ohm )<br>1 Channel JX200067(240-30ohm)<br>4 Channels JKE00525 |
| Dimension             | NKC42 90*40*25mm                | NKC43 70*Ø27mm  |
| Protection Rating     | IP67                            |   |
| Signal Output         | NMEA2000/J1939 Network Messages |   |
| Operating Voltage     | 8~32V                           |   |
| Connector             | Male "Micro-C" Pinout           |   |
| Operation Temperature | -400F ~ +1850F(-400C~+850C)     |   |
| Max Current           | 50mA                            |   |



## NJ/JN Gateway

NJ gateway can be used to convert the engine speed, oil pressure, temperature and voltage data in NMEA2000 network into the corresponding information in J1939 network JN gateway is used for converting the engine speed, oil pressure, temperature and voltage data in J1939 network into the corresponding information in NMEA2000 network.

|                              |   |
|------------------------------|---|
| Dimension                    | 93.8 x 39.6 x 32.3 mm   |
| Product Name                 | JN/JX200068(J1939-NMEA2000 )<br>NJ/JX200069 ( NMEA2000-J1939) |
| Weight                       | 76g   |
| Operating Voltage            | 9~16V   |
| Power Consumption            | <50mA   |
| Load Equivalence Number(LEN) | 1   |
| Operating Temperature        | -30~+75°C   |
| Storage Temperature          | -40~+80°C   |
| Degree of Protection         | IP65  |



## Set Up Tool

Art. No.: JX200021

KUS Sea N series gauges and level sensors have several configurable parameters, which are shown below including the default values. If you are not using the default values, you will need to use the set up tool to configuring gauge and level sensor.

### Gauge

- Fuel Level Meter/Water Level Meter/Holding Tank Meter.  
Tank Number(instance) - Default is tank 0.  
The Gauge supports up to sixteen tanks(0~15).
- Coolant Temp. Meter/Oil Pressure Meter.  
Engine Number(instance) - Default is engine 0.  
The Gauge supports up to sixteen engines (0~15).

### Sensor

- Tank Type-Default is Fuel. You can reconfigure the sensor for any of these tank types, such as Fuel, Fresh Water, Waste Water, Live Well, Oil, Black Water.
- Tank Number(instance)-Default is tank 0. The sensor supports up to sixteen tanks(0~15) for a given type of tank.
- Tank Capacity-Default is No tank Capacity Transmitted.



## GPS Receiver

GPS receiver receives the satellite signal and provide high-precision real-time location information to NMEA2000 and J1939 network.

|          |          |
|----------|----------|
| NMEA2000 | JKE00169 |
| J1939    | JKE00229 |





## NMEA Gateway

The NGW is one type of Plug and Play Bluetooth NMEA 2000™ gateway. The NMEA 2000 Wi-Fi Gateway can send the real-time engine usage data by Bluetooth, all data can then be transferred to an App that can view all data from a NMEA 2000 marine digital network on Android device, such as PC or smart phone.

With it, you get marine network data including Fuel/water tank level, engine data, voltage, vessel course, speed, position, wind speed and direction, water depth and etc. from vessels and aircrafts and other navigation data in popular software applications.

## Features

- ◆ Built-in Blue tooth, easy installation, with the standard Micro-connector;
- ◆ Simple to use, Plug and Play without any other devices;
- ◆ Customized data, to send the needed data to the user;
- ◆ Wi-Fi or Bluetooth transfer way can be personalized;
- ◆ Compatible with Smart Phones, Pad in Android system.

## Specification

- ◆ Model: NGW
- ◆ Art No.: JX200065
- ◆ Dimension: 60x40x20 mm
- ◆ Material: Plastic
- ◆ Power Supply: 9~16V
- ◆ Power Current: 45mA
- ◆ Installation Way: Micro-C
- ◆ Waterproof standard: IP67



# Sea V Series

Premium Quality, Professional Choice.



## Features:

- IP67 protection rating for the entire gauge; can work up to 1m underwater;
- Double layer reinforced anti-fogging glass;
- 316 Stainless steel bezel with convex glass;
- Easy installation with multi-plug socket connection design;
- Selection of red or yellow backlight;
- Default working voltage: 12V
  - Compatible also with 24V for stepping motor and LCD type gauges;
  - Require an extra resistor to work with 24V for cross coil type gauge.

| WATER LEVEL |                |         |                    |                  |                  |                 |                        |
|-------------|----------------|---------|--------------------|------------------|------------------|-----------------|------------------------|
| Art. No.    | Model          | Signal  | Picture Indicating | Bezel            | Indicating Range | Working Voltage | Installation Dimension |
| KY11004     | CPWR-BS-0-190  | 0~190Ω  |                    | SS 316           | Empty-Full       | 12V/24V         | Φ52mm                  |
| KY11001     | CPWR-BS-240-33 | 240~33Ω |                    |                  |                  |                 |                        |
| KY11100     | CPWR-WS-0-190  | 0~190Ω  |                    |                  |                  |                 |                        |
| KY11101     | CPWR-WS-240-33 | 240~33Ω |                    |                  |                  |                 |                        |
| KY11002     | CPWR-BN-0-190  | 0~190Ω  |                    | SS 316 in black  |                  |                 |                        |
| KY11003     | CPWR-BN-240-33 | 240~33Ω |                    | plastic in black |                  |                 |                        |
| KY11200     | CPWR-BB-0-190  | 0~190Ω  |                    |                  |                  |                 |                        |
| KY11201     | CPWR-BB-240-33 | 240~33Ω |                    | plastic in white |                  |                 |                        |
| KY11300     | CPWR-WW-0-190  | 0~190Ω  |                    |                  |                  |                 |                        |
| KY11301     | CPWR-WW-240-33 | 240~33Ω |                    |                  |                  |                 |                        |



| FUEL LEVEL |                |         |                    |                  |               |                 |                        |
|------------|----------------|---------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.   | Model          | Signal  | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY10005    | CPFR-BS-0-190  | 0~190Ω  |                    | SS 316           | Empty-Full    | 12V/24V         | Φ52mm                  |
| KY10004    | CPFR-BS-240-33 | 240~33Ω |                    |                  |               |                 |                        |
| KY10100    | CPFR-WS-0-190  | 0~190Ω  |                    |                  |               |                 |                        |
| KY10101    | CPFR-WS-240-33 | 240~33Ω |                    |                  |               |                 |                        |
| KY10002    | CPFR-BN-0-190  | 0~190Ω  |                    | SS 316 in black  |               |                 |                        |
| KY10003    | CPFR-BN-240-33 | 240~33Ω |                    | plastic in black |               |                 |                        |
| KY10200    | CPFR-BB-0-190  | 0~190Ω  |                    |                  |               |                 |                        |
| KY10201    | CPFR-BB-240-33 | 240~33Ω |                    | plastic in white |               |                 |                        |
| KY10300    | CPFR-WW-0-190  | 0~190Ω  |                    |                  |               |                 |                        |
| KY10301    | CPFR-WW-240-33 | 240~33Ω |                    |                  |               |                 |                        |

| VOLTMETER |               |        |                    |                  |               |                 |                        |
|-----------|---------------|--------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.  | Model         | Signal | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY13000   | CPVR-BS-8-16  | 8~16V  |                    | SS 316           | 8~16V         | 12V             | Φ52mm                  |
| KY13100   | CPVR-WS-8-16  |        |                    | SS 316 in black  |               |                 |                        |
| KY13013   | CPVR-BN-8-16  |        |                    | plastic in black |               |                 |                        |
| KY13200   | CPVR-BB-8-16  |        |                    |                  |               |                 |                        |
| KY13304   | CPVR-WW-8-16  |        |                    | plastic in white |               |                 |                        |
| KY13001   | CPVR-BS-18-32 | 18~32V |                    | SS 316           | 18~32V        | 24V             | Φ52mm                  |
| KY13101   | CPVR-WS-18-32 |        |                    | SS 316 in black  |               |                 |                        |
| KY13012   | CPVR-BN-18-32 |        |                    | plastic in black |               |                 |                        |
| KY13201   | CPVR-BB-18-32 |        |                    |                  |               |                 |                        |
| KY13305   | CPVR-WW-18-32 |        |                    | plastic in white |               |                 |                        |

| WATER TEMP. |                |                                     |                    |                  |               |                 |                        |
|-------------|----------------|-------------------------------------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.    | Model          | Signal                              | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY14004     | CPTR-BS-40-120 | Matched with KUS temperature sensor |                    | SS 316           | 40~120°C      | 12V/24V         | Φ52mm                  |
| KY14100     | CPTR-WS-40-120 |                                     |                    | SS 316 in black  |               |                 |                        |
| KY14002     | CPTR-BN-40-120 |                                     |                    | plastic in black |               |                 |                        |
| KY14200     | CPTR-BB-40-120 |                                     |                    | plastic in black |               |                 |                        |
| KY14304     | CPTR-WW-40-120 |                                     |                    | plastic in white |               |                 |                        |

| OIL TEMP. |                |                                     |                    |                  |               |                 |                        |
|-----------|----------------|-------------------------------------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.  | Model          | Signal                              | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY14005   | CPYR-BS-50-150 | Matched with KUS temperature sensor |                    | SS 316           | 50~150°C      | 12V/24V         | Φ52mm                  |
| KY14102   | CPYR-WS-50-150 |                                     |                    | SS 316 in black  |               |                 |                        |
| KY14000   | CPYR-BN-50-150 |                                     |                    | plastic in black |               |                 |                        |
| KY14202   | CPYR-BB-50-150 |                                     |                    | plastic in black |               |                 |                        |
| KY14305   | CPYR-WW-50-150 |                                     |                    | plastic in white |               |                 |                        |

| TRIM     |               |        |                    |                  |               |                 |                        |
|----------|---------------|--------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No. | Model         | Signal | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY09205  | CPIR-BS-0-190 | 0~190Ω |                    | SS 316           | DOWN-UP       | 12V/24V         | Φ52mm                  |
| KY09103  | CPIR-WS-0-190 |        |                    | SS 316 in black  |               |                 |                        |
| KY09204  | CPIR-BN-0-190 |        |                    | plastic in black |               |                 |                        |
| KY09206  | CPIR-BB-0-190 |        |                    | plastic in black |               |                 |                        |
| KY09207  | CPIR-WW-0-190 |        |                    | plastic in white |               |                 |                        |

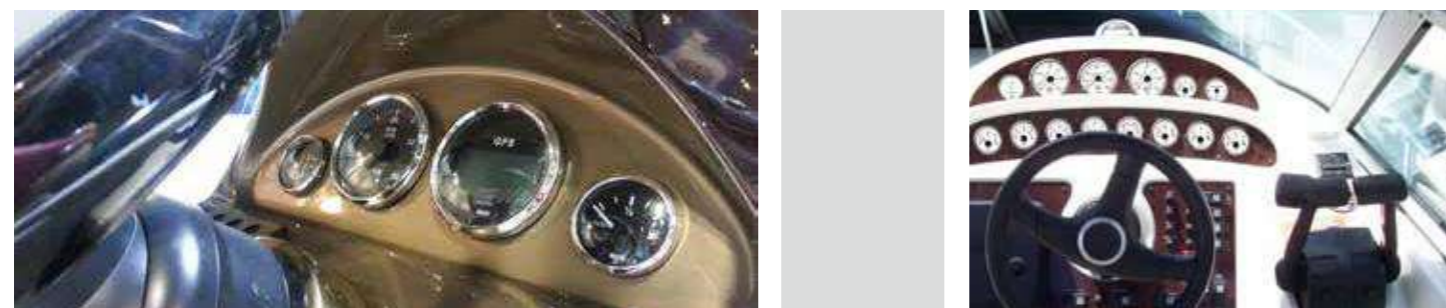
| TRIM     |                |   |                    |                  |               |                 |                        |
|----------|----------------|---|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No. | Model          | Signal  | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY09028  | CPIR-BS-0-190  | 0~190Ω  |                    | SS 316           | UP-DOWN       | 12V/24V         | Φ52mm                  |
| KY09115  | CPIR-WS-0-190  |   |                    | SS 316 in black  |               |                 |                        |
| KY09116  | CPIR-BN-0-190  |   |                    | plastic in black |               |                 |                        |
| KY09220  | CPIR-BB-0-190  |   |                    | plastic in black |               |                 |                        |
| KY09312  | CPIR-WW-0-190  |   |                    | plastic in white |               |                 |                        |
| KY09043  | CPIR-BS-160-10 | 160~10Ω<br>* To match with mercury or force engine. |                    | SS 316           | UP-DOWN       | 12V/24V         | Φ52mm                  |
| KY09123  | CPIR-WS-160-10 |   |                    | SS 316 in black  |               |                 |                        |
| KY09044  | CPIR-BN-160-10 |   |                    | plastic in black |               |                 |                        |
| KY09228  | CPIR-BB-160-10 |   |                    | plastic in black |               |                 |                        |
| KY09314  | CPIR-WW-160-10 |   |                    | plastic in white |               |                 |                        |



| OIL PRESSURE |              |   |                    |                  |               |                 |                        |
|--------------|--------------|---|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.     | Model        | Signal                                  | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY15000      | CPPR-BS-0-5  | 10~184Ω<br>240-33Ω<br>can be customized |                    | SS 316           | 0~5Bar        | 12V/24V         | Φ52mm                  |
| KY15100      | CPPR-WS-0-5  |   |                    | SS 316 in black  |               |                 |                        |
| KY15001      | CPPR-BN-0-5  |   |                    | plastic in black |               |                 |                        |
| KY15201      | CPPR-BB-0-5  |   |                    | plastic in white |               |                 |                        |
| KY15300      | CPPR-WW-0-5  |   |                    | plastic in white |               |                 |                        |
| KY15006      | CPPR-BS-0-10 | 10~184Ω<br>240-33Ω<br>can be customized |                    | SS 316           | 0~10Bar       | 12V/24V         | Φ52mm                  |
| KY15103      | CPPR-WS-0-10 |   |                    | SS 316 in black  |               |                 |                        |
| KY15008      | CPPR-BN-0-10 |   |                    | plastic in black |               |                 |                        |
| KY15202      | CPPR-BB-0-10 |   |                    | plastic in black |               |                 |                        |
| KY15303      | CPPR-WW-0-10 |   |                    | plastic in white |               |                 |                        |

| HOLDING TANK |                |         |                    |                  |               |                 |                        |
|--------------|----------------|---------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.     | Model          | Signal  | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY12002      | CPGR-BS-0-190  | 0~190Ω  |                    | SS 316           | LOW-FULL      | 12V/24V         | Φ52mm                  |
| KY12102      | CPGR-WS-0-190  |         |                    | SS 316 in black  |               |                 |                        |
| KY12003      | CPGR-BN-0-190  |         |                    | plastic in black |               |                 |                        |
| KY12202      | CPGR-BB-0-190  |         |                    | plastic in black |               |                 |                        |
| KY12302      | CPGR-WW-0-190  |         |                    | plastic in white |               |                 |                        |
| KY12000      | CPGR-BS-240-33 | 240~33Ω |                    | SS 316           | LOW-FULL      | 12V/24V         | Φ52mm                  |
| KY12100      | CPGR-WS-240-33 |         |                    | SS 316 in black  |               |                 |                        |
| KY12001      | CPGR-BN-240-33 |         |                    | plastic in black |               |                 |                        |
| KY12200      | CPGR-BB-240-33 |         |                    | plastic in black |               |                 |                        |
| KY12300      | CPGR-WW-240-33 |         |                    | plastic in white |               |                 |                        |

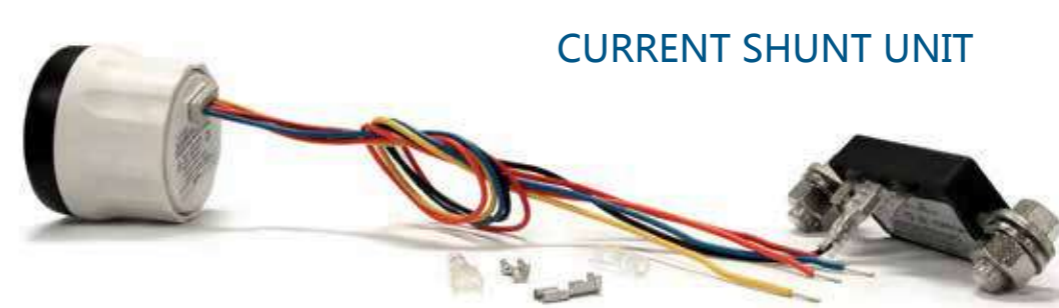
| RUDDER ANGLE |                |  |                    |                  |               |                 |                        |
|--------------|----------------|--|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.     | Model          | Signal   | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY09002      | CMRR-BS-87-900 | 87~900Ω, Matched with JSM4480 rudder angle sensor. |                    | SS 316           | R-L           | 12V/24V         | Φ52mm                  |
| KY09102      | CMRR-WS-87-900 |  |                    | SS 316 in black  |               |                 |                        |
| KY09004      | CMRR-BN-87-900 |  |                    | plastic in black |               |                 |                        |
| KY09201      | CMRR-BB-87-900 |  |                    | plastic in black |               |                 |                        |
| KY09305      | CMRR-WW-87-900 |  |                    | plastic in white |               |                 |                        |
| KY09011      | CMRR-BS-0-190  | 0~190Ω, Matched with KE41000 rudder angle sensor.  |                    | SS 316           | R-L           | 12V/24V         | Φ52mm                  |
| KY09106      | CMRR-WS-0-190  |  |                    | SS 316 in black  |               |                 |                        |
| KY09018      | CMRR-BN-0-190  |  |                    | plastic in black |               |                 |                        |
| KY09209      | CMRR-BB-0-190  |  |                    | plastic in black |               |                 |                        |
| KY09309      | CMRR-WW-0-190  |  |                    | plastic in white |               |                 |                        |



| CLOCK    |            |        |                    |                  |                |                 |                        |
|----------|------------|--------|--------------------|------------------|----------------|-----------------|------------------------|
| Art. No. | Model      | Signal | Picture Indicating | Bezel            | Display Range  | Working Voltage | Installation Dimension |
| KY09000  | CMCR-BS-12 | N/A    |                    | SS 316           | 12-hour format | 12V/24V         | Φ52mm                  |
| KY09100  | CMCR-WS-12 |        |                    | SS 316 in black  |                |                 |                        |
| KY09003  | CMCR-BN-12 |        |                    | plastic in black |                |                 |                        |
| KY09202  | CMCR-BB-12 |        |                    | plastic in black |                |                 |                        |
| KY09304  | CMCR-WW-12 |        |                    | plastic in white |                |                 |                        |

\* Red backlight only

| AMMETER  |             |  |                    |                  |               |                 |                        |
|----------|-------------|--|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No. | Model       | Signal                                   | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY06007  | CMAR-BS±50  | Matched with KUS 50A current shunt unit  |                    | SS 316           | ±50 A         | 12V/24V         | Φ52mm                  |
| KY06103  | CMAR-WS±50  |  |                    | SS 316 in black  |               |                 |                        |
| KY06008  | CMAR-BN±50  |  |                    | plastic in black |               |                 |                        |
| KY06201  | CMAR-BB±50  |  |                    | plastic in black |               |                 |                        |
| KY06301  | CMAR-WW±50  |  |                    | plastic in white |               |                 |                        |
| KY06005  | CMAR-BS±80  | Matched with KUS 100A current shunt unit |                    | SS 316           | ±80 A         | 12V/24V         | Φ52mm                  |
| KY06102  | CMAR-WS±80  |  |                    | SS 316 in black  |               |                 |                        |
| KY06009  | CMAR-BN±80  |  |                    | plastic in black |               |                 |                        |
| KY06200  | CMAR-BB±80  |  |                    | plastic in black |               |                 |                        |
| KY06300  | CMAR-WW±80  |  |                    | plastic in white |               |                 |                        |
| KY06010  | CMAR-BS±150 | Matched with KUS 150A current shunt unit |                    | SS 316           | ±150 A        | 12V/24V         | Φ52mm                  |
| KY06101  | CMAR-WS±150 |  |                    | SS 316 in black  |               |                 |                        |
| KY06011  | CMAR-BN±150 |  |                    | plastic in black |               |                 |                        |
| KY06203  | CMAR-BB±150 |  |                    | plastic in black |               |                 |                        |
| KY06302  | CMAR-WW±150 |  |                    | plastic in white |               |                 |                        |



CURRENT SHUNT UNIT

- \* The ammeter works exceptionally well with KUS current shunt unit.
- \* The working voltage of KUS current shunt unit is 8~32VDC, which is compatible with most of the ammeters.
- \* With Hall current testing method, KUS current shunt unit features long service life and accurate output. It also has the function of charge-discharge detection.

| DIGITAL AMMETER |             |  |                    |                  |               |                 |                        |
|-----------------|-------------|--|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.        | Model       | Signal                                   | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY26004         | CEAR-BS±50  | Matched with KUS 50A current shunt unit  |                    | SS 316           | ±50A          | 12V/24V         | Φ52mm                  |
| KY26101         | CEAR-WS±50  |  |                    | SS 316 in black  |               |                 |                        |
| KY26000         | CEAR-BN±50  |  |                    | plastic in black |               |                 |                        |
| KY26200         | CEAR-BB±50  |  |                    | plastic in black |               |                 |                        |
| KY26300         | CEAR-WW±50  |  |                    | plastic in white |               |                 |                        |
| KY26001         | CEAR-BS±80  | Matched with KUS 100A current shunt unit |                    | SS 316           | ±80A          |                 |                        |
| KY26102         | CEAR-WS±80  |  |                    | SS 316 in black  |               |                 |                        |
| KY26003         | CEAR-BN±80  |  |                    | plastic in black |               |                 |                        |
| KY26201         | CEAR-BB±80  |  |                    | plastic in black |               |                 |                        |
| KY26301         | CEAR-WW±80  |  |                    | plastic in white |               |                 |                        |
| KY26002         | CEAR-BS±150 | Matched with KUS 150A current shunt unit |                    | SS 316           | ±150A         |                 |                        |
| KY26103         | CEAR-WS±150 |  |                    | SS 316 in black  |               |                 |                        |
| KY26005         | CEAR-BN±150 |  |                    | plastic in black |               |                 |                        |
| KY26202         | CEAR-BB±150 |  |                    | plastic in black |               |                 |                        |
| KY26302         | CEAR-WW±150 |  |                    | plastic in white |               |                 |                        |



| 3 LED ALARM INDICATOR |                 |               |                    |                  |               |                 |                        |
|-----------------------|-----------------|---------------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.              | Model           | Signal        | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY99300               | SSS-PAN-3LED-BS | Switch Signal |                    | SS 316           | FULL-HIGH-ON  | 12V/24V         | Φ52mm                  |
| KY99402               | SSS-PAN-3LED-WS |               |                    | SS 316 in black  |               |                 |                        |
| KY99302               | SSS-PAN-3LED-BN |               |                    | plastic in black |               |                 |                        |
| KY99200               | SSS-PAN-3LED-BB |               |                    | plastic in black |               |                 |                        |
| KY99400               | SSS-PAN-3LED-WW |               |                    | plastic in white |               |                 |                        |

| 8 LED WATER LEVEL GAUGE |                |          |                    |                  |               |                 |                        |
|-------------------------|----------------|----------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.                | Model          | Signal   | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY11021                 | CDWR-BS-240-33 | 240~33 Ω |                    | SS 316           | Empty-Full    | 12V/24V         | Φ52mm                  |
| KY11113                 | CDWR-WS-240-33 |          |                    | SS 316 in black  |               |                 |                        |
| KY11114                 | CDWR-BN-240-33 |          |                    | plastic in black |               |                 |                        |
| KY11207                 | CDWR-BB-240-33 |          |                    | plastic in black |               |                 |                        |
| KY11305                 | CDWR-WW-240-33 |          |                    | plastic in white |               |                 |                        |

| 8 LED FUEL LEVEL GAUGE |                |          |                    |                  |               |                 |                        |
|------------------------|----------------|----------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.               | Model          | Signal   | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY10034                | CDFR-BS-240-33 | 240~33 Ω |                    | SS 316           | Empty-Full    | 12V/24V         | Φ52mm                  |
| KY10118                | CDFR-WS-240-33 |          |                    | SS 316 in black  |               |                 |                        |
| KY10036                | CDFR-BN-240-33 |          |                    | plastic in black |               |                 |                        |
| KY10216                | CDFR-BB-240-33 |          |                    | plastic in black |               |                 |                        |
| KY10309                | CDFR-WW-240-33 |          |                    | plastic in white |               |                 |                        |

| 8 LED HOLDING TANK GAUGE |                |          |                    |                  |               |                 |                        |
|--------------------------|----------------|----------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.                 | Model          | Signal   | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY12015                  | CDGR-BS-240-33 | 240~33 Ω |                    | SS 316           | Low-Full      | 12V/24V         | Φ52mm                  |
| KY12108                  | CDGR-WS-240-33 |          |                    | SS 316 in black  |               |                 |                        |
| KY12018                  | CDGR-BN-240-33 |          |                    | plastic in black |               |                 |                        |
| KY12204                  | CDGR-BB-240-33 |          |                    | plastic in black |               |                 |                        |
| KY12304                  | CDGR-WW-240-33 |          |                    | plastic in white |               |                 |                        |

| NAVIGATION INDICATOR |              |                             |                    |                  |               |                 |                        |
|----------------------|--------------|-----------------------------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.             | Model        | Signal                      | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY99304              | CONR-BS-5LED | Matched with KUS controller |                    | SS 316           | N/A           | 12V/24V         | Φ52mm                  |
| KY99501              | CONR-WS-5LED |                             |                    | SS 316 in black  |               |                 |                        |
| KY99303              | CONR-BN-5LED |                             |                    | plastic in black |               |                 |                        |
| KY99202              | CONR-BB-5LED |                             |                    | plastic in black |               |                 |                        |
| KY99403              | CONR-WW-5LED |                             |                    | plastic in white |               |                 |                        |

| 4 LED ALARM GAUGE |         |               |                    |                  |               |                 |                        |
|-------------------|---------|---------------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.          | Model   | Signal        | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY79002           | CDQR-BS | Switch Signal |                    | SS 316           | N/A           | 12V/24V         | Φ52mm                  |
| KY79103           | CDQR-WS |               |                    | SS 316 in black  |               |                 |                        |
| KY79004           | CDQR-BN |               |                    | plastic in black |               |                 |                        |
| KY79202           | CDQR-BB |               |                    | plastic in black |               |                 |                        |
| KY79303           | CDQR-WW |               |                    | plastic in white |               |                 |                        |

| DIGITAL WATER TEMP. |                |                                     |                    |                  |               |                 |                        |
|---------------------|----------------|-------------------------------------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.            | Model          | Signal                              | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY24000             | CETR-BS-25-120 | Matched with KUS temperature sensor |                    | SS 316           | 25~120°C      | 12V/24V         | Φ52mm                  |
| KY24100             | CETR-WS-25-120 |                                     |                    | SS 316 in black  |               |                 |                        |
| KY24002             | CETR-BN-25-120 |                                     |                    | plastic in black |               |                 |                        |
| KY24200             | CETR-BB-25-120 |                                     |                    | plastic in black |               |                 |                        |
| KY24300             | CETR-WW-25-120 |                                     |                    | plastic in white |               |                 |                        |

| DIGITAL OIL PRESSURE |              |         |                    |                  |               |                 |                        |
|----------------------|--------------|---------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.             | Model        | Signal  | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY15042              | CEPR-BS-0-5  | 10~184Ω |                    | SS 316           | 0~5Bar        | 12V/24V         | Φ52mm                  |
| KY15115              | CEPR-WS-0-5  |         |                    | SS 316 in black  |               |                 |                        |
| KY15043              | CEPR-BN-0-5  |         |                    | plastic in black |               |                 |                        |
| KY15021              | CEPR-BB-0-5  |         |                    | plastic in black |               |                 |                        |
| KY15308              | CEPR-WW-0-5  |         |                    | plastic in white |               |                 |                        |
| KY15012              | CEPR-BS-0-10 | 10~184Ω |                    | SS 316           | 0~10Bar       | 12V/24V         | Φ52mm                  |
| KY15015              | CEPR-WS-0-10 |         |                    | SS 316 in black  |               |                 |                        |
| KY15035              | CEPR-BN-0-10 |         |                    | plastic in black |               |                 |                        |
| KY15022              | CEPR-BB-0-10 |         |                    | plastic in black |               |                 |                        |
| KY15307              | CEPR-WW-0-10 |         |                    | plastic in white |               |                 |                        |


| DIGITAL VOLTMETER |              |        |                    |                  |               |                 |                        |
|-------------------|--------------|--------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.          | Model        | Signal | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY23000           | CEVR-BS-9-32 | 9~32V  |                    | SS 316           | 9~32V         | 12V/24V         | Φ52mm                  |
| KY23100           | CEVR-WS-9-32 |        |                    | SS 316 in black  |               |                 |                        |
| KY23001           | CEVR-BN-9-32 |        |                    | plastic in black |               |                 |                        |
| KY23200           | CEVR-BB-9-32 |        |                    | plastic in black |               |                 |                        |
| KY23303           | CEVR-WW-9-32 |        |                    | plastic in white |               |                 |                        |



| HOURMETER |         |        |                    |                  |               |                 |                        |
|-----------|---------|--------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.  | Model   | Signal | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY39000   | CCUR-BS | N/A    |                    | SS 316           | 0~99999       | 12V/24V         | Φ52mm                  |
| KY39202   | CCUR-WS |        |                    | SS 316 in black  |               |                 |                        |
| KY39001   | CCUR-BN |        |                    | plastic in black |               |                 |                        |
| KY39201   | CCUR-BB |        |                    | plastic in black |               |                 |                        |
| KY39200   | CCUR-WW |        |                    | plastic in white |               |                 |                        |



| DIGITAL GPS SPEEDOMETER |         |        |                    |                  |               |                 |                        |
|-------------------------|---------|--------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.                | Model   | Signal | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY08041                 | CCSR-BS | GPS    |                    | SS 316           | 0-999Km/h     | 12V/24V         | Φ52mm                  |
| KY08120                 | CCSR-WS |        |                    | SS 316 in black  |               |                 |                        |
| KY08056                 | CCSR-BN |        |                    | plastic in black |               |                 |                        |
| KY08217                 | CCSR-BB |        |                    | plastic in black |               |                 |                        |
| KY08309                 | CCSR-WW |        |                    | plastic in white |               |                 |                        |

 \* This Speedo has the function of mileage accumulation (Maximum 99999 Km), and data can be saved even the gauge is power down.  
 \* 5 meters long GPS antenna is included in the package, so it's no need to order it separately.  
 \* Red background light only.



| DIGITAL FUEL LEVEL |                |        |                    |                  |               |                 |                        |
|--------------------|----------------|--------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.           | Model          | Signal | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY20001            | CEFR-BS-0-190  | 0~190Ω |                    | SS 316           | 0~100%        | 12V/24V         | Φ52mm                  |
| KY20101            | CEFR-WS-0-190  |        |                    | SS 316 in black  |               |                 |                        |
| JMV00352           | CEFR-BN-0-190  |        |                    | plastic in black |               |                 |                        |
| KY22001            | CEFR-BB-0-190  |        |                    | plastic in black |               |                 |                        |
| JMV00353           | CEFR-WW-0-190  |        |                    | plastic in white |               |                 |                        |
| KY20006            | CEFR-BS-240-33 |        | 240~33Ω            |                  |               |                 |                        |
| KY10116            | CEFR-WS-240-33 |        |                    | SS 316 in black  |               |                 |                        |
| JMV00354           | CEFR-BN-240-33 |        |                    | plastic in black |               |                 |                        |
| KY10214            | CEFR-BB-240-33 |        |                    | plastic in black |               |                 |                        |
| JMV00355           | CEFR-WW-240-33 |        |                    | plastic in white |               |                 |                        |

| TACHOMETER with 4 LED ALARM |             |          |                    |                  |               |                 |                        |
|-----------------------------|-------------|----------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.                    | Model       | Signal   | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| KY07046                     | CMHB-BS-7KL | 1.0-10.0 |                    | SS 316           | 0~7000RPM     | 12V/24V         | Φ85mm                  |
| KY07123                     | CMHB-WS-7KL |          |                    | SS 316 in black  |               |                 |                        |
| KY07047                     | CMHB-BN-7KL |          |                    | plastic in black |               |                 |                        |
| KY07213                     | CMHB-BB-7KL |          |                    | plastic in black |               |                 |                        |
| KY07312                     | CMHB-WW-7KL |          |                    | plastic in white |               |                 |                        |

\* The light alarms including CHK ENG, Low Pressure, Low Fuel, Temperature.



| Art. No. | Model       | Speed Ratio | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
|----------|-------------|-------------|--------------------|------------------|---------------|-----------------|------------------------|
| KY07025  | CMHB-BS-3KL | 1.0~10.0    |                    | SS 316           | 0~3000rpm     | 12V/24V         | Φ85mm                  |
| KY07116  | CMHB-WS-3KL |             |                    | SS 316           |               |                 |                        |
| KY07026  | CMHB-BN-3KL |             |                    | SS 316 in black  |               |                 |                        |
| KY07208  | CMHB-BB-3KL |             |                    | plastic in black |               |                 |                        |
| KY07310  | CMHB-WW-3KL |             |                    | plastic in white |               |                 |                        |
| KY07008  | CMHB-BS-4KL |             |                    | SS 316           |               |                 |                        |
| KY07105  | CMHB-WS-4KL |             |                    | SS 316 in black  |               |                 |                        |
| KY07027  | CMHB-BN-4KL |             |                    | SS 316 in black  |               |                 |                        |
| KY07204  | CMHB-BB-4KL |             |                    | plastic in black |               |                 |                        |
| KY07306  | CMHB-WW-4KL |             |                    | plastic in white |               |                 |                        |
| KY07009  | CMHB-BS-6KL |             |                    | SS 316           | 0~6000rpm     |                 |                        |
| KY07106  | CMHB-WS-6KL |             |                    | SS 316 in black  |               |                 |                        |
| KY07028  | CMHB-BN-6KL |             | SS 316 in black    |                  |               |                 |                        |
| KY07205  | CMHB-BB-6KL |             | plastic in black   |                  |               |                 |                        |
| KY07307  | CMHB-WW-6KL |             | plastic in white   |                  |               |                 |                        |
| KY07010  | CMHB-BS-8KL |             | SS 316             | 0~8000rpm        |               |                 |                        |
| KY07107  | CMHB-WS-8KL |             | SS 316 in black    |                  |               |                 |                        |
| KY07029  | CMHB-BN-8KL |             | SS 316 in black    |                  |               |                 |                        |
| KY07206  | CMHB-BB-8KL |             | plastic in black   |                  |               |                 |                        |
| KY07308  | CMHB-WW-8KL |             | plastic in white   |                  |               |                 |                        |
| KY07005  | CMHB-BS-3KL | 0.5-250     |                    |                  | SS 316        | 0~3000rpm       | 12V/24V                |
| KY07111  | CMHB-WS-3KL |             |                    | SS 316 in black  |               |                 |                        |
| KY07014  | CMHB-BN-3KL |             |                    | SS 316 in black  |               |                 |                        |
| KY07209  | CMHB-BB-3KL |             |                    | plastic in black |               |                 |                        |
| KY07309  | CMHB-WW-3KL |             |                    | plastic in white |               |                 |                        |
| KY07043  | CMHB-BS-4KL |             |                    | SS 316           | 0~4000rpm     |                 |                        |
| KY07102  | CMHB-WS-4KL |             |                    | SS 316 in black  |               |                 |                        |
| KY07015  | CMHB-BN-4KL |             |                    | SS 316 in black  |               |                 |                        |
| KY07202  | CMHB-BB-4KL |             |                    | plastic in black |               |                 |                        |
| KY07303  | CMHB-WW-4KL |             |                    | plastic in white |               |                 |                        |
| KY07000  | CMHB-BS-6KL |             |                    | SS 316           |               | 0~6000rpm       |                        |
| KY07101  | CMHB-WS-6KL |             |                    | SS 316 in black  |               |                 |                        |
| KY07016  | CMHB-BN-6KL |             | SS 316 in black    |                  |               |                 |                        |
| KY07200  | CMHB-BB-6KL |             | plastic in black   |                  |               |                 |                        |
| KY07302  | CMHB-WW-6KL |             | plastic in white   |                  |               |                 |                        |
| KY07003  | CMHB-BS-8KL |             | SS 316             | 0~8000rpm        |               |                 |                        |
| KY07103  | CMHB-WS-8KL |             | SS 316 in black    |                  |               |                 |                        |
| KY07017  | CMHB-BN-8KL |             | SS 316 in black    |                  |               |                 |                        |
| KY07203  | CMHB-BB-8KL |             | plastic in black   |                  |               |                 |                        |
| KY07304  | CMHB-WW-8KL |             | plastic in white   |                  |               |                 |                        |



\* Note : The speed ratio is adjustable. Alternative ratio range is 1.0~10.0

\* Note : The speed ratio is adjustable. Alternative ratio range is 0.5~250.0.

**NEW**  
**DIGITAL TACHOMETER**




| Art. No. | Model       | Speed Ratio | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
|----------|-------------|-------------|--------------------|------------------|---------------|-----------------|------------------------|
| JMV00547 | CCHB-BS-3KL | 1.0~10.0    |                    | SS 316           | 0~3000rpm     | 12V/24V         | Φ85mm                  |
| JMV00549 | CCHB-WS-3KL |             |                    | SS 316           |               |                 |                        |
| JMV00548 | CCHB-BN-3KL |             |                    | SS 316 in black  |               |                 |                        |
| JMV00546 | CCHB-BB-3KL |             |                    | plastic in black |               |                 |                        |
| JMV00525 | CCHB-WW-3KL |             |                    | plastic in white |               |                 |                        |
| JMV00560 | CCHB-BS-4KL |             |                    | SS 316           |               |                 |                        |
| JMV00561 | CCHB-WS-4KL |             |                    | SS 316 in black  |               |                 |                        |
| JMV00562 | CCHB-BN-4KL |             |                    | SS 316 in black  |               |                 |                        |
| JMV00563 | CCHB-BB-4KL |             |                    | plastic in black |               |                 |                        |
| JMV00564 | CCHB-WW-4KL |             |                    | plastic in white |               |                 |                        |
| JMV00551 | CCHB-BS-6KL |             |                    | SS 316           | 0~6000rpm     |                 |                        |
| JMV00550 | CCHB-WS-6KL |             |                    | SS 316 in black  |               |                 |                        |
| JMV00552 | CCHB-BN-6KL |             | SS 316 in black    |                  |               |                 |                        |
| JMV00553 | CCHB-BB-6KL |             | plastic in black   |                  |               |                 |                        |
| JMV00554 | CCHB-WW-6KL |             | plastic in white   |                  |               |                 |                        |
| JMV00558 | CCHB-BS-8KL |             | SS 316             | 0~8000rpm        |               |                 |                        |
| JMV00559 | CCHB-WS-8KL |             | SS 316 in black    |                  |               |                 |                        |
| JMV00557 | CCHB-BN-8KL |             | SS 316 in black    |                  |               |                 |                        |
| JMV00556 | CCHB-BB-8KL |             | plastic in black   |                  |               |                 |                        |
| JMV00555 | CCHB-WW-8KL |             | plastic in white   |                  |               |                 |                        |
| JMV00533 | CCHB-BS-3KL | 0.5-250.0   |                    |                  | SS 316        | 0~3000rpm       | 12V/24V                |
| JMV00535 | CCHB-WS-3KL |             |                    | SS 316 in black  |               |                 |                        |
| JMV00534 | CCHB-BN-3KL |             |                    | SS 316 in black  |               |                 |                        |
| JMV00532 | CCHB-BB-3KL |             |                    | plastic in black |               |                 |                        |
| JMV00531 | CCHB-WW-3KL |             |                    | plastic in white |               |                 |                        |
| JMV00526 | CCHB-BS-4KL |             |                    | SS 316           | 0~4000rpm     |                 |                        |
| JMV00527 | CCHB-WS-4KL |             |                    | SS 316 in black  |               |                 |                        |
| JMV00528 | CCHB-BN-4KL |             |                    | SS 316 in black  |               |                 |                        |
| JMV00529 | CCHB-BB-4KL |             |                    | plastic in black |               |                 |                        |
| JMV00530 | CCHB-WW-4KL |             |                    | plastic in white |               |                 |                        |
| JMV00537 | CCHB-BS-6KL |             |                    | SS 316           |               | 0~6000rpm       |                        |
| JMV00536 | CCHB-WS-6KL |             |                    | SS 316 in black  |               |                 |                        |
| JMV00538 | CCHB-BN-6KL |             | SS 316 in black    |                  |               |                 |                        |
| JMV00539 | CCHB-BB-6KL |             | plastic in black   |                  |               |                 |                        |
| JMV00540 | CCHB-WW-6KL |             | plastic in white   |                  |               |                 |                        |
| JMV00544 | CCHB-BS-8KL |             | SS 316             | 0~8000rpm        |               |                 |                        |
| JMV00545 | CCHB-WS-8KL |             | SS 316 in black    |                  |               |                 |                        |
| JMV00543 | CCHB-BN-8KL |             | SS 316 in black    |                  |               |                 |                        |
| JMV00542 | CCHB-BB-8KL |             | plastic in black   |                  |               |                 |                        |
| JMV00541 | CCHB-WW-8KL |             | plastic in white   |                  |               |                 |                        |




\* Note : The speed ratio is adjustable. Alternative ratio range is 1.0~10.0.

\* Note : The speed ratio is adjustable. Alternative ratio range is 0.5~250.0.


SPEEDOMETER



| Art. No. | Model      | Signal                               | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
|----------|------------|--------------------------------------|--------------------|------------------|---------------|-----------------|------------------------|
| KY18003  | CPOB-BS-35 | Pitot tube provides pressure signals |                    | SS 316           | 0~35MPH       | 12V/24V         | Φ85mm                  |
| KY18102  | CPOB-WS-35 |                                      |                    | SS 316           |               |                 |                        |
| KY18010  | CPOB-BN-35 |                                      |                    | SS 316 in black  |               |                 |                        |
| KY18204  | CPOB-BB-35 |                                      |                    | plastic in black |               |                 |                        |
| KY18304  | CPOB-WW-35 |                                      |                    | plastic in white |               |                 |                        |
| KY18002  | CPOB-BS-55 |                                      |                    | SS 316           | 0~55MPH       |                 |                        |
| KY18101  | CPOB-WS-55 |                                      |                    | SS 316 in black  |               |                 |                        |
| KY18011  | CPOB-BN-55 |                                      |                    | SS 316 in black  |               |                 |                        |
| KY18203  | CPOB-BB-55 |                                      |                    | plastic in black |               |                 |                        |
| KY18303  | CPOB-WW-55 |                                      |                    | plastic in white |               |                 |                        |
| KY18004  | CPOB-BS-65 |                                      |                    | SS 316           | 0~65MPH       |                 |                        |
| KY18103  | CPOB-WS-65 |                                      |                    | SS 316           |               |                 |                        |
| KY18009  | CPOB-BN-65 |                                      |                    | SS 316 in black  |               |                 |                        |
| KY18206  | CPOB-BB-65 |                                      |                    | plastic in black |               |                 |                        |
| KY18306  | CPOB-WW-65 |                                      |                    | plastic in white |               |                 |                        |




\* Pitot tube need ordered separately.  
Art. No. : JYM1060




Art. No. : JKE00284


SPEEDOMETER



| Art. No. | Model        | Signal         | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
|----------|--------------|----------------|--------------------|------------------|---------------|-----------------|------------------------|
| KY08000  | CMOB-BS-120L | Normal impulse |                    | SS 316           | 0~120km/h     | 12V/24V         | Φ85mm                  |
| KY08100  | CMOB-WS-120L |                |                    | SS 316           |               |                 |                        |
| KY08001  | CMOB-BN-120L |                |                    | SS 316 in black  |               |                 |                        |
| KY08200  | CMOB-BB-120L |                |                    | plastic in black |               |                 |                        |
| KY08302  | CMOB-WW-120L |                |                    | plastic in white |               |                 |                        |
| KY08015  | CMOB-BS-200L |                |                    | SS 316           |               |                 |                        |
| KY08107  | CMOB-WS-200L |                |                    | SS 316 in black  |               |                 |                        |
| KY08016  | CMOB-BN-200L |                |                    | SS 316 in black  |               |                 |                        |
| KY08209  | CMOB-BB-200L |                |                    | plastic in black |               |                 |                        |
| KY08306  | CMOB-WW-200L |                |                    | plastic in white |               |                 |                        |




DIGITAL GPS SPEEDOMETER



| Art. No. | Model   | Remarks | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
|----------|---------|---------|--------------------|------------------|---------------|-----------------|------------------------|
| KY08021  | CCSB-BS | I       |                    | SS 316           | 0~999Knots    | 12V/24V         | Φ85mm                  |
| KY08109  | CCSB-WS |         |                    | SS 316           |               |                 |                        |
| KY08022  | CCSB-BN |         |                    | SS 316 in black  |               |                 |                        |
| KY08213  | CCSB-BB |         |                    | plastic in black |               |                 |                        |
| KY08308  | CCSB-WW |         |                    | plastic in white |               |                 |                        |
| KY08038  | CCSB-BS | II      |                    | SS 316           |               |                 |                        |
| JMV00148 | CCSB-WS |         |                    | SS 316           |               |                 |                        |
| KY08047  | CCSB-BN |         |                    | SS 316 in black  |               |                 |                        |
| JMV00149 | CCSB-BB |         |                    | plastic in black |               |                 |                        |
| JMV00150 | CCSB-WW |         |                    | plastic in white |               |                 |                        |

I : The gauge has the function of accumulating the mileage of a single time, all data will reset when power on or unit switches.

II : This Speedo has the function of mileage accumulation (Maximum 99999 Km), and data can be saved even the gauge is power down.



\* Note: Customers can choose between units displaying in km/h, knots, or mph. The unit mileage and position are integrated into the display. The accumulated data will be cleared to zero after power off, it also can be customized for keeping the history data.

\* 5 meters long GPS antenna is included in the package, so it's no need to order it separately.

| Art. No. | Model   | Remarks | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
|----------|---------|---------|--------------------|------------------|---------------|-----------------|------------------------|
| JMV00359 | CCSB-BS | III     |                    | SS 316           | 0~999Knots    | 12V/24V         | Φ85mm                  |
| JMV00360 | CCSB-WS |         |                    | SS 316           |               |                 |                        |
| JMV00361 | CCSB-BN |         |                    | SS 316 in black  |               |                 |                        |
| JMV00362 | CCSB-BB |         |                    | plastic in black |               |                 |                        |
| JMV00363 | CCSB-WW |         |                    | plastic in white |               |                 |                        |
| JMV00364 | CCSB-BS | IV      |                    | SS 316           |               |                 |                        |
| JMV00365 | CCSB-WS |         |                    | SS 316           |               |                 |                        |
| JMV00366 | CCSB-BN |         |                    | SS 316 in black  |               |                 |                        |
| JMV00367 | CCSB-BB |         |                    | plastic in black |               |                 |                        |
| JMV00368 | CCSB-WW |         |                    | plastic in white |               |                 |                        |

\* With built-in GPS antenna.


III: The gauge has the function of accumulating the mileage of a single time, all data will reset when power on or unit switches.

IV: This Speedo had the function of mileage accumulation(Maximum 99999Km), and data can be saved even the gauge is power down.



| Art. No. | Model       | Signal | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
|----------|-------------|--------|--------------------|------------------|---------------|-----------------|------------------------|
| KY08017  | CMSB-BS-15L | GPS    |                    | SS 316           | 0~15Knots     | 12V/24V         | Φ85mm                  |
| KY08108  | CMSB-WS-15L |        |                    | SS 316           |               |                 |                        |
| KY08018  | CMSB-BN-15L |        |                    | SS 316 in black  |               |                 |                        |
| KY08215  | CMSB-BB-15L |        |                    | plastic in black |               |                 |                        |
| KY08307  | CMSB-WW-15L |        |                    | plastic in white |               |                 |                        |
| KY08009  | CMSB-BS-30L |        |                    | SS 316           | 0~30Knots     |                 |                        |
| KY08105  | CMSB-WS-30L |        |                    | SS 316           |               |                 |                        |
| KY08019  | CMSB-BN-30L |        |                    | SS 316 in black  |               |                 |                        |
| KY08210  | CMSB-BB-30L |        |                    | plastic in black |               |                 |                        |
| KY08303  | CMSB-WW-30L |        |                    | plastic in white |               |                 |                        |
| KY08011  | CMSB-BS-60L |        |                    | SS 316           | 0~60Knots     |                 |                        |
| KY08103  | CMSB-WS-60L |        |                    | SS 316           |               |                 |                        |
| KY08020  | CMSB-BN-60L |        |                    | SS 316 in black  |               |                 |                        |
| KY08211  | CMSB-BB-60L |        |                    | plastic in black |               |                 |                        |
| KY08304  | CMSB-WW-60L |        |                    | plastic in white |               |                 |                        |



 \* 5 meters long GPS antenna is included in the package, so it's no need to order it separately.

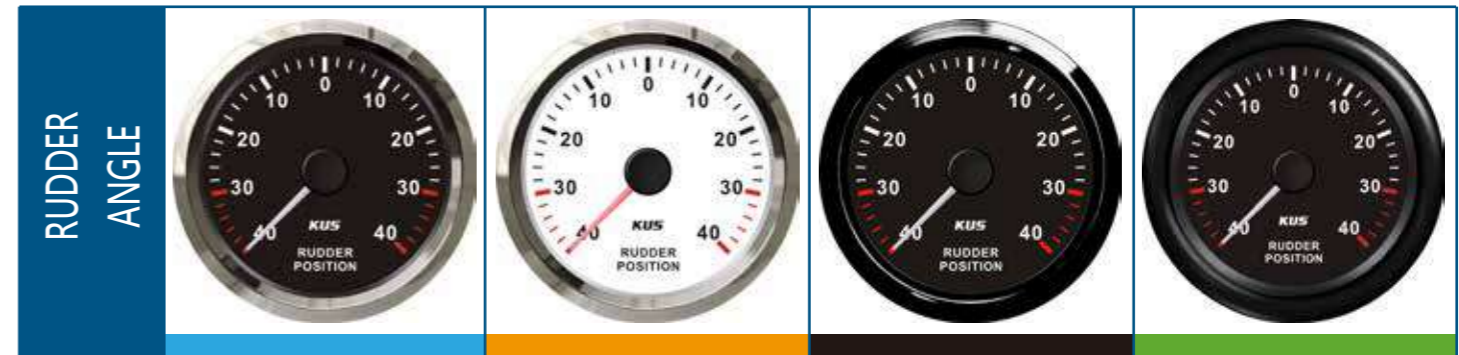
| Art. No. | Model       | Signal | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
|----------|-------------|--------|--------------------|------------------|---------------|-----------------|------------------------|
| JMV00369 | CMSB-BS-15L | GPS    |                    | SS 316           | 0~15Knots     | 12V/24V         | Φ85mm                  |
| JMV00370 | CMSB-WS-15L |        |                    | SS 316           |               |                 |                        |
| JMV00371 | CMSB-BN-15L |        |                    | SS 316 in black  |               |                 |                        |
| JMV00372 | CMSB-BB-15L |        |                    | plastic in black |               |                 |                        |
| JMV00373 | CMSB-WW-15L |        |                    | plastic in white |               |                 |                        |
| JMV00374 | CMSB-BS-30L |        |                    | SS 316           | 0~30Knots     |                 |                        |
| JMV00375 | CMSB-WS-30L |        |                    | SS 316           |               |                 |                        |
| JMV00376 | CMSB-BN-30L |        |                    | SS 316 in black  |               |                 |                        |
| JMV00377 | CMSB-BB-30L |        |                    | plastic in black |               |                 |                        |
| JMV00378 | CMSB-WW-30L |        |                    | plastic in white |               |                 |                        |
| JMV00379 | CMSB-BS-60L |        |                    | SS 316           | 0~60Knots     |                 |                        |
| JMV00380 | CMSB-WS-60L |        |                    | SS 316           |               |                 |                        |
| JMV00381 | CMSB-BN-60L |        |                    | SS 316 in black  |               |                 |                        |
| JMV00382 | CMSB-BB-60L |        |                    | plastic in black |               |                 |                        |
| JMV00383 | CMSB-WW-60L |        |                    | plastic in white |               |                 |                        |

\* With built-in GPS antenna.



| Art. No. | Model         | Signal | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
|----------|---------------|--------|--------------------|------------------|---------------|-----------------|------------------------|
| KY09009  | CMRB-BS-0-190 | 0~190Ω |                    | SS 316           | R-L           | 12V/24V         | Φ85mm                  |
| KY09105  | CMRB-WS-0-190 |        |                    | SS 316           |               |                 |                        |
| KY09017  | CMRB-BN-0-190 |        |                    | SS 316 in black  |               |                 |                        |
| KY09215  | CMRB-BB-0-190 |        |                    | plastic in black |               |                 |                        |
| KY09311  | CMRB-WW-0-190 |        |                    | plastic in white |               |                 |                        |
|          |               |        |                    | plastic in white |               |                 |                        |

\* The rudder angle with Signal 0-190Ω can be matched with KE41000,.




| Art. No. | Model        | Signal | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
|----------|--------------|--------|--------------------|------------------|---------------|-----------------|------------------------|
| KY09012  | CMRB-BS-0-5K | 0~5K   |                    | SS 316           |               | 12V/24V         | Φ85mm                  |
| JMV00390 | CMRB-WS-0-5K |        |                    | SS 316           |               |                 |                        |
| KY09014  | CMRB-BN-0-5K |        |                    | SS 316 in black  |               |                 |                        |
| JMV00391 | CMRB-BB-0-5K |        |                    | plastic in black |               |                 |                        |
| KY09313  | CMRB-WW-0-5K |        |                    | plastic in white |               |                 |                        |

\* The rudder angle with Signal 0-5K can be matched with KE41002.



| EXHAUST TEMP. METER |               |             |                    |                  |               |                 |                        |
|---------------------|---------------|-------------|--------------------|------------------|---------------|-----------------|------------------------|
| Art. No.            | Model         | Signal      | Picture Indicating | Bezel            | Display Range | Working Voltage | Installation Dimension |
| JMV00172            | CMTR-BS-0-800 | 0~33.277 MV |                    | SS 316           | 0-800         | 12V/24V         | Φ52mm                  |
| JMV00173            | CMTR-WS-0-800 |             |                    | SS 316 in black  |               |                 |                        |
| JMV00342            | CMTR-BN-0-800 |             |                    | plastic in black |               |                 |                        |
| KY09214             | CMTR-BB-0-800 |             |                    | plastic in white |               |                 |                        |
| KY09308             | CMTR-WW-0-800 |             |                    | SS 316           | 0-200         |                 |                        |
| JMV00385            | CMTR-BS-0-200 |             |                    | SS 316 in black  |               |                 |                        |
| JMV00386            | CMTR-WS-0-200 |             |                    | plastic in black |               |                 |                        |
| JMV00387            | CMTR-BN-0-200 |             |                    | plastic in white |               |                 |                        |
| JMV00388            | CMTR-BB-0-200 |             |                    | SS 316           |               |                 |                        |
| JMV00389            | CMTR-WW-0-200 |             |                    | SS 316 in black  |               |                 |                        |



### Exhaust Temperature Sensor

Used for sensing high temperatures such as exhaust gas. Standard K Type signal and ungrounded for use in both marine and automotive applications.

|  |   |
|--|---|
| Art. No.: JYE0207<br>Range: 0 - 800°C<br>Main material: SS316<br>With 5M sheathed wire<br>Thread: PT 3/8"<br>Form ungrounded | Art. No.: 150210<br>Range: 0 - 200°C<br>Main material: SS316<br>With 3.5M sheathed wire<br>Thread: PT 3/8"<br>Form ungrounded |
|--|---|





| 3 IN 1 MULTIFUNCTION |           |   |                    |        |  |                 |                        |
|----------------------|-----------|---|--------------------|--------|--|-----------------|------------------------|
| Art. No.             | Model     | Signal  | Picture Indicating | Bezel  | Display Range  | Working Voltage | Installation Dimension |
| JMV00233             | CMQE-BS-3 | 0-180ohm for fuel level meter; 8-16V voltage meter 0-6000RPM tachometer |                    | SS 316 | Fuel level meter: empty-full<br>Voltmeter: 8-16v,<br>Tachometer: 0-6000rpm | 12V/24V         | Φ110mm                 |
| JMV00234             | CMQE-WS-3 |   |                    |        |  |                 |                        |






| 4 IN 1 MULTIFUNCTION |           |  |                    |        |  |                 |                        |
|----------------------|-----------|--|--------------------|--------|--|-----------------|------------------------|
| Art. No.             | Model     | Signal   | Picture Indicating | Bezel  | Display Range  | Working Voltage | Installation Dimension |
| JMV00235             | CMQE-BS-4 | Input Signal :<br>10-184ohm for 0-10 bar oil pressure meter;<br>0-180ohm for fuel level meter;<br>8-16V voltage meter;<br>Input Signal 310-20ohm for water temperature meter |                    | SS 316 | Oil press. meter: 0-80psi;<br>Water temp. meter: 100-250F;<br>Fuel level meter: empty-full;<br>Voltmeter: 8-16v. | 12V/24V         | Φ110mm                 |
| JMV00236             | CMQE-WS-4 |  |                    |        |  |                 |                        |

| 60MPH SPEEDOMETER |            |        |                    |        |               |                 |                        |
|-------------------|------------|--------|--------------------|--------|---------------|-----------------|------------------------|
| Art. No.          | Model      | Signal | Picture Indicating | Bezel  | Display Range | Working Voltage | Installation Dimension |
| JMV00237          | CMSE-BS-60 | GPS    |                    | SS 316 | 0-60MPH       | 12V/24V         | Φ110mm                 |
| JMV00238          | CMSE-WS-60 |        |                    |        |               |                 |                        |

| 0-6000 RPM TACHOMETER |             |          |                    |        |               |                 |                        |
|-----------------------|-------------|----------|--------------------|--------|---------------|-----------------|------------------------|
| Art. No.              | Model       | Signal   | Picture Indicating | Bezel  | Display Range | Working Voltage | Installation Dimension |
| JMV00239              | CMHE-BS-6KL | 1.0-10.0 |                    | SS 316 | 0-6000 RPM    | 12V/24V         | Φ110mm                 |
| JMV00240              | CMHE-WS-6KL |          |                    |        |               |                 |                        |

DIGITAL 4 IN 1  
MULTIFUNCTION

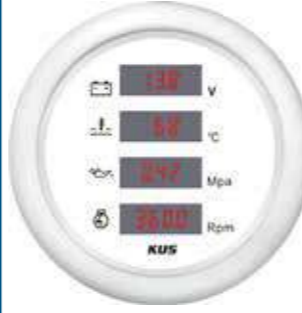
| Art. No. | Model      | Signal   | Picture Indicating  | Bezel            | Display Range | Working Voltage | Installation Dimension |
|----------|------------|----------|---|------------------|---------------|-----------------|------------------------|
| KY79000  | P4-VTPR-BS | as below |  | SS 316           | as below      | 12V/24V         | Φ85mm                  |
| KY79102  | P4-VTPR-WS |          |  |                  |               |                 |                        |
| JMV00356 | P4-VTPR-BN |          |  | SS 316 in black  |               |                 |                        |
| JMV00357 | P4-VTPR-BB |          |  | plastic in black |               |                 |                        |
| JMV00358 | P4-VTPR-WW |          |  | plastic in white |               |                 |                        |

**Signal**

Input Signal 310-20ohm for water temp. meter;  
Input Signal : 10-184ohm for oil pressure meter;  
0-6000RPM tachometer.  
Speedo Ratio : 0.5-250.0

**Display Range**

Voltmeter: 9-32V  
Water temp. meter: 20-120°C  
Oil pressure meter: 0-1mpa  
Tachometer: 0-6000rpm



## Gauge Accessories

### Gauge Holder

| Art. No. | Size  | Material |
|----------|-------|----------|
| JYA0061  | 52 mm | Alu.     |
| JYA0062  | 85 mm |          |



### GAUGE BEZEL(Plastic)

\* The above bezels are only for plastic bezel gauge replacement, not applicable for the stainless steel bezel gauge.



| Art. No. | Size  | Color          |
|----------|-------|----------------|
| 160001   | 52 mm | White Plastic  |
| 160041   | 85 mm |                |
| 160000   | 52 mm | Black Plastic  |
| 160040   | 85 mm |                |
| 160003   | 52 mm | Golden Plastic |
| JYP1556  | 85 mm |                |
| 160002   | 52 mm | Sliver Plastic |
| 160042   | 85 mm |                |



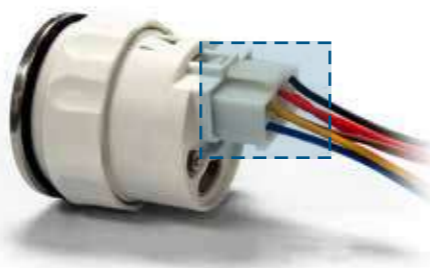
# Sea Q Series


Premium Quality, Professional Choice.





















## Features:










- Front side has IP67 protection rating; back side has IP65 protection rating;
- Double layer reinforced anti-fogging glass;
- 316 Stainless steel bezel with convex glass;
- Quick and easy to install by terminal;
- Selection of red or yellow backlight, without connector cable;
- Connect directly without extra resistors for 12/24V working voltage.









|                |   |
|----------------|---|
| Optional part  |  |
| Art. No.       | JYS0302   |
| Length of wire | 400 mm  |

| FUEL LEVEL |                |  |  |  |               |                 |                        |
|------------|----------------|---|---|---|---------------|-----------------|------------------------|
| Art. No.   | Model          | Signal  | Picture Indicating  | Bezel   | Display Range | Working Voltage | Installation Dimension |
| KF10020    | FPFR-BS-0-190  | 0~190Ω  |  | SS 316  | Empty-Full    | 12V/24V         | Φ52mm                  |
| KF10022    | FPFR-BS-240-33 | 240~33Ω   |  |   |               |                 |                        |
| KF10114    | FPFR-WS-0-190  | 0~190Ω  |  |   |               |                 |                        |
| KF10115    | FPFR-WS-240-33 | 240~33Ω   |  | SS 316 in black   |               |                 |                        |
| KF10026    | FPFR-BN-0-190  | 0~190Ω  |  |   |               |                 |                        |
| KF10027    | FPFR-BN-240-33 | 240~33Ω   |  |   |               |                 |                        |

| WATER LEVEL |                |  |  |  |               |                 |                        |
|-------------|----------------|---|---|---|---------------|-----------------|------------------------|
| Art. No.    | Model          | Signal  | Picture Indicating  | Bezel   | Display Range | Working Voltage | Installation Dimension |
| KF11015     | FPWR-BS-0-190  | 0~190Ω  |  | SS 316  | Empty-Full    | 12V/24V         | Φ52mm                  |
| KF11017     | FPWR-BS-240-33 | 240~33Ω   |  |   |               |                 |                        |
| KF11110     | FPWR-WS-0-190  | 0~190Ω  |  |   |               |                 |                        |
| KF11111     | FPWR-WS-240-33 | 240~33Ω   |  | SS 316 in black   |               |                 |                        |
| KF11016     | FPWR-BN-0-190  | 0~190Ω  |  |   |               |                 |                        |
| KF11018     | FPWR-BN-240-33 | 240~33Ω   |  |   |               |                 |                        |

| HOLDING TANK |                |  |   |  |               |                 |                        |
|--------------|----------------|--|---|--|---------------|-----------------|------------------------|
| Art. No.     | Model          | Signal   | Picture Indicating  | Bezel  | Display Range | Working Voltage | Installation Dimension |
| KF12010      | FPGR-BS-0-190  | 0~190Ω   |  | SS 316   | LOW-FUL       | 12V/24V         | Φ52mm                  |
| KF12012      | FPGR-BS-240-33 | 240~33Ω  |  |  |               |                 |                        |
| KF12106      | FPGR-WS-0-190  | 0~190Ω   |  |  |               |                 |                        |
| KF12107      | FPGR-WS-240-33 | 240~33Ω  |  | SS 316 in black  |               |                 |                        |
| KF12011      | FPGR-BN-0-190  | 0~190Ω   |  |  |               |                 |                        |
| KF12013      | FPGR-BN-240-33 | 240~33Ω  |  |  |               |                 |                        |

| WATER TEMP. |                |  |  |  |                 |                 |                        |
|-------------|----------------|---|---|---|-----------------|-----------------|------------------------|
| Art. No.    | Model          | Signal  | Picture Indicating  | Bezel   | Display Range   | Working Voltage | Installation Dimension |
| KF14024     | FPTR-BS-40-120 | Matched with KUS temperature sensor   |  | SS 316  | 40~120°C        | 12V/24V         | Φ52mm                  |
| KF14107     | FPTR-WS-40-120 |   |  |   |                 |                 |                        |
| KF14025     | FPTR-BN-40-120 |   |  |   | SS 316 in black |                 |                        |

| OIL TEMP. |                |                                     |                    |                 |               |                 |                        |
|-----------|----------------|-------------------------------------|--------------------|-----------------|---------------|-----------------|------------------------|
| Art. No.  | Model          | Signal                              | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
| KF14026   | FPYR-BS-50-150 | Matched with KUS temperature sensor |                    | SS 316          | 50~150°C      | 12V/24V         | Φ52mm                  |
| KF14108   | FPYR-WS-50-150 |                                     |                    |                 |               |                 |                        |
| KF14027   | FPYR-BN-50-150 |                                     |                    | SS 316 in black |               |                 |                        |

| VOLTMETER |               |        |                    |                 |               |                 |                        |
|-----------|---------------|--------|--------------------|-----------------|---------------|-----------------|------------------------|
| Art. No.  | Model         | Signal | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
| KF13017   | FPVR-BS-8-16  | 8~16V  |                    | SS 316          | 8~16V         | 12V             | Φ52mm                  |
| KF13107   | FPVR-WS-8-16  |        |                    |                 |               |                 |                        |
| KF13018   | FPVR-BN-8-16  |        |                    | SS 316 in black |               |                 |                        |
| KF13016   | FPVR-BS-18-32 | 18~32V |                    | SS 316          | 18~32V        | 24V             | Φ52mm                  |
| KF13108   | FPVR-WS-18-32 |        |                    |                 |               |                 |                        |
| KF13019   | FPVR-BN-18-32 |        |                    | SS 316 in black |               |                 |                        |

| OIL PRESSURE |              |         |                    |                 |               |                 |                        |
|--------------|--------------|---------|--------------------|-----------------|---------------|-----------------|------------------------|
| Art. No.     | Model        | Signal  | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
| KF15036      | FPPR-BS-0-5  | 10~184Ω |                    | SS 316          | 0~5Bar        | 12V/24V         | Φ52mm                  |
| KF15112      | FPPR-WS-0-5  |         |                    |                 |               |                 |                        |
| KF15037      | FPPR-BN-0-5  |         |                    | SS 316 in black |               |                 |                        |
| KF15038      | FPPR-BS-0-10 | 10~184Ω |                    | SS 316          | 0~10Bar       | 12V/24V         | Φ52mm                  |
| KF15113      | FPPR-WS-0-10 |         |                    |                 |               |                 |                        |
| KF15039      | FPPR-BN-0-10 |         |                    | SS 316 in black |               |                 |                        |

| RUDDER ANGLE |                |  |                    |                 |               |                 |                        |
|--------------|----------------|--|--------------------|-----------------|---------------|-----------------|------------------------|
| Art. No.     | Model          | Signal   | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
| KF09019      | FMRR-BS-87-900 | 87~900Ω,<br>Matched with JSM4480<br>rudder angle sensor. |                    | SS 316          | R-L           | 12V/24V         | Φ52mm                  |
| KF09110      | FMRR-WS-87-900 |  |                    |                 |               |                 |                        |
| KF09020      | FMRR-BN-87-900 |  |                    | SS 316 in black |               |                 |                        |
| KF09021      | FMRR-BS-0-190  | 0~190Ω,<br>Matched with KE41000<br>rudder angle sensor.  |                    | SS 316          | R-L           | 12V/24V         | Φ52mm                  |
| KF09111      | FMRR-WS-0-190  |  |                    |                 |               |                 |                        |
| KF09022      | FMRR-BN-0-190  |  |                    | SS 316 in black |               |                 |                        |

\* Installation: Customers can easily adjust the deviations caused by assembling or sensor signal difference.

| TRIM     |               |        |                    |                 |               |                 |                        |
|----------|---------------|--------|--------------------|-----------------|---------------|-----------------|------------------------|
| Art. No. | Model         | Signal | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
| KF09023  | FPIR-BS-0-190 | 0~190Ω |                    | SS 316          | DOWN-UP       | 12V/24V         | Φ52mm                  |
| KF09113  | FPIR-WS-0-190 |        |                    |                 |               |                 |                        |
| KF09024  | FPIR-BN-0-190 |        |                    | SS 316 in black |               |                 |                        |

| TRIM     |               |        |                    |                 |               |                 |                        |
|----------|---------------|--------|--------------------|-----------------|---------------|-----------------|------------------------|
| Art. No. | Model         | Signal | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
| KF09030  | FPIR-BS-0-190 | 0~190Ω |                    | SS 316          | DOWN-UP       | 12V/24V         | Φ52mm                  |
| KF09116  | FPIR-WS-0-190 |        |                    |                 |               |                 |                        |
| KF09031  | FPIR-BN-0-190 |        |                    | SS 316 in black |               |                 |                        |

| DIGITAL VOLTMETER |              |        |                    |                 |               |                 |                        |
|-------------------|--------------|--------|--------------------|-----------------|---------------|-----------------|------------------------|
|                   |              |        |                    |                 |               |                 |                        |
| Art. No.          | Model        | Signal | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
| KF23005           | FEVR-BS-9-32 | 9~32V  |                    | SS 316          | 9~32V         | 12V/24V         | Φ52mm                  |
| KF23105           | FEVR-WS-9-32 |        |                    | SS 316          |               |                 |                        |
| KF23006           | FEVR-BN-9-32 |        |                    | SS 316 in black |               |                 |                        |

| HOURMETER |         |        |                    |                 |               |                 |                        |
|-----------|---------|--------|--------------------|-----------------|---------------|-----------------|------------------------|
|           |         |        |                    |                 |               |                 |                        |
| Art. No.  | Model   | Signal | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
| KF39002   | FCUR-BS | N/A    |                    | SS 316          | 0~99999       | 12V/24V         | Φ52mm                  |
| KF39101   | FCUR-WS |        |                    | SS 316          |               |                 |                        |
| KF39003   | FCUR-BN |        |                    | SS 316 in black |               |                 |                        |

| DIGITAL WATER TEMP. |                |                                     |                    |                 |               |                 |                        |
|---------------------|----------------|-------------------------------------|--------------------|-----------------|---------------|-----------------|------------------------|
|                     |                |                                     |                    |                 |               |                 |                        |
| Art. No.            | Model          | Signal                              | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
| KF24006             | FETR-BS-25-120 | Matched with KUS temperature sensor |                    | SS 316          | 25~120°C      | 12V/24V         | Φ52mm                  |
| KF24101             | FETR-WS-25-120 |                                     |                    | SS 316          |               |                 |                        |
| KF24007             | FETR-BN-25-120 |                                     |                    | SS 316 in black |               |                 |                        |

| DIGITAL OIL PRESSURE |              |         |                    |                 |               |                 |                        |
|----------------------|--------------|---------|--------------------|-----------------|---------------|-----------------|------------------------|
|                      |              |         |                    |                 |               |                 |                        |
| Art. No.             | Model        | Signal  | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
| KF15044              | FEPR-BS-0-5  | 10~184Ω |                    | SS 316          | 0~5Bar        | 12V/24V         | Φ52mm                  |
| KF15116              | FEPR-WS-0-5  |         |                    | SS 316          |               |                 |                        |
| KF15045              | FEPR-BN-0-5  |         |                    | SS 316 in black |               |                 |                        |
| KF15040              | FEPR-BS-0-10 | 10~184Ω |                    | SS 316          | 0~10Bar       | 12V/24V         | Φ52mm                  |
| KF15114              | FEPR-WS-0-10 |         |                    | SS 316          |               |                 |                        |
| KF15041              | FEPR-BN-0-10 |         |                    | SS 316 in black |               |                 |                        |

| DIGITAL AMMETER |             |                                       |                    |                 |               |                 |                        |
|-----------------|-------------|---------------------------------------|--------------------|-----------------|---------------|-----------------|------------------------|
|                 |             |                                       |                    |                 |               |                 |                        |
| Art. No.        | Model       | Signal                                | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
| KF26008         | FEAR-BS±50  | Matched with KUS current pick-up unit |                    | SS 316          | ±50A          | 12V/24V         | Φ52mm                  |
| KF26105         | FEAR-WS±50  |                                       |                    | SS 316          |               |                 |                        |
| KF26009         | FEAR-BN±50  |                                       |                    | SS 316 in black |               |                 |                        |
| KF26010         | FEAR-BS±80  | Matched with KUS current pick-up unit |                    | SS 316          | ±80A          | 12V/24V         | Φ52mm                  |
| KF26106         | FEAR-WS±80  |                                       |                    | SS 316          |               |                 |                        |
| KF26011         | FEAR-BN±80  |                                       |                    | SS 316 in black |               |                 |                        |
| KF26006         | FEAR-BS±150 | Matched with KUS current pick-up unit |                    | SS 316          | ±150A         | 12V/24V         | Φ52mm                  |
| KF26104         | FEAR-WS±150 |                                       |                    | SS 316          |               |                 |                        |
| KF26007         | FEAR-BN±150 |                                       |                    | SS 316 in black |               |                 |                        |

| 4 LED ALARM GAUGE |         |               |                    |                 |               |                 |                        |
|-------------------|---------|---------------|--------------------|-----------------|---------------|-----------------|------------------------|
|                   |         |               |                    |                 |               |                 |                        |
| Art. No.          | Model   | Signal        | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
| KF79003           | FDQR-BS | Switch Signal |                    | SS 316          | N/A           | 12V/24V         | Φ52mm                  |
| KF79104           | FDQR-WS |               |                    | SS 316          |               |                 |                        |
| KF79005           | FDQR-BN |               |                    | SS 316 in black |               |                 |                        |

| DIGITAL FUEL LEVEL |                |         |                    |                 |               |                 |                        |
|--------------------|----------------|---------|--------------------|-----------------|---------------|-----------------|------------------------|
| Art. No.           | Model          | Signal  | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
| KF20005            | FEFR-BS-0-190  | 0-190Ω  |                    | SS 316          | 0~100%        | 12V/24V         | Φ52mm                  |
| JMQ00025           | FEFR-WS-0-190  |         |                    | SS 316 in black |               |                 |                        |
| JMQ00026           | FEFR-BN-0-190  |         |                    | SS 316          |               |                 |                        |
| JMQ00027           | FEFR-BS-240-33 | 240-33Ω |                    | SS 316          |               |                 |                        |
| JMQ00028           | FEFR-WS-240-33 |         |                    | SS 316 in black |               |                 |                        |
| JMQ00029           | FEFR-BN-240-33 |         |                    | SS 316 in black |               |                 |                        |



| GPS SPEEDOMETER |             |        |                    |                 |               |                 |                        |
|-----------------|-------------|--------|--------------------|-----------------|---------------|-----------------|------------------------|
| Art. No.        | Model       | Signal | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
| KF08029         | FMSB-BS-15L | GPS    |                    | SS 316          | 0~15Knots     | 12V             | Φ85mm                  |
| KF08113         | FMSB-WS-15L |        |                    | SS 316 in black |               |                 |                        |
| KF08030         | FMSB-BN-15L |        |                    | SS 316          |               |                 |                        |
| KF08031         | FMSB-BS-30L |        |                    | SS 316          | 0~30Knots     |                 |                        |
| KF08114         | FMSB-WS-30L |        |                    | SS 316 in black |               |                 |                        |
| KF08032         | FMSB-BN-30L |        |                    | SS 316          | 0~60Knots     |                 |                        |
| KF08033         | FMSB-BS-60L |        |                    | SS 316          |               |                 |                        |
| KF08115         | FMSB-WS-60L |        |                    | SS 316 in black |               |                 |                        |
| KF08034         | FMSB-BN-60L |        |                    | SS 316 in black |               |                 |                        |



\* 5 meters long GPS antenna is included in the package, so it's no need to order it separately.

| Art. No. | Model       | Signal | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
|----------|-------------|--------|--------------------|-----------------|---------------|-----------------|------------------------|
| JMQ00030 | FMSB-BS-15L | GPS    |                    | SS 316          | 0~15Knots     | 12V             | Φ85mm                  |
| JMQ00031 | FMSB-WS-15L |        |                    | SS 316 in black |               |                 |                        |
| JMQ00032 | FMSB-BN-15L |        |                    | SS 316          |               |                 |                        |
| JMQ00033 | FMSB-BS-30L |        |                    | SS 316          | 0~30Knots     |                 |                        |
| JMQ00034 | FMSB-WS-30L |        |                    | SS 316 in black |               |                 |                        |
| JMQ00035 | FMSB-BN-30L |        |                    | SS 316          | 0~60Knots     |                 |                        |
| JMQ00036 | FMSB-BS-60L |        |                    | SS 316          |               |                 |                        |
| JMQ00037 | FMSB-WS-60L |        |                    | SS 316 in black |               |                 |                        |
| JMQ00038 | FMSB-BN-60L |        | SS 316 in black    |                 |               |                 |                        |

\* With built-in GPS antenna.





| Art. No. | Model       | Speed Ratio | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
|----------|-------------|-------------|--------------------|-----------------|---------------|-----------------|------------------------|
| KF07018  | FMHB-BS-3KL | 0.5~250.0   |                    | SS 316          | 0~3000rpm     | 12V/24V         | Φ85mm                  |
| KF07112  | FMHB-WS-3KL |             |                    | SS 316          |               |                 |                        |
| KF07019  | FMHB-BN-3KL |             |                    | SS 316 in black |               |                 |                        |
| KF07020  | FMHB-BS-4KL | 0.5~250.0   |                    | SS 316          | 0~4000rpm     |                 |                        |
| KF07113  | FMHB-WS-4KL |             |                    | SS 316          |               |                 |                        |
| KF07021  | FMHB-BN-4KL |             |                    | SS 316 in black |               |                 |                        |
| KF07012  | FMHB-BS-6KL | 0.5~250.0   |                    | SS 316          | 0~6000rpm     |                 |                        |
| KF07114  | FMHB-WS-6KL |             |                    | SS 316          |               |                 |                        |
| KF07022  | FMHB-BN-6KL |             |                    | SS 316 in black |               |                 |                        |
| KF07023  | FMHB-BS-8KL | 0.5~250.0   |                    | SS 316          | 0~8000rpm     |                 |                        |
| KF07115  | FMHB-WS-8KL |             |                    | SS 316          |               |                 |                        |
| KF07024  | FMHB-BN-8KL |             |                    | SS 316 in black |               |                 |                        |

\* Note : The speed ratio is adjustable. Alternative ratio range is 0.5~250.0

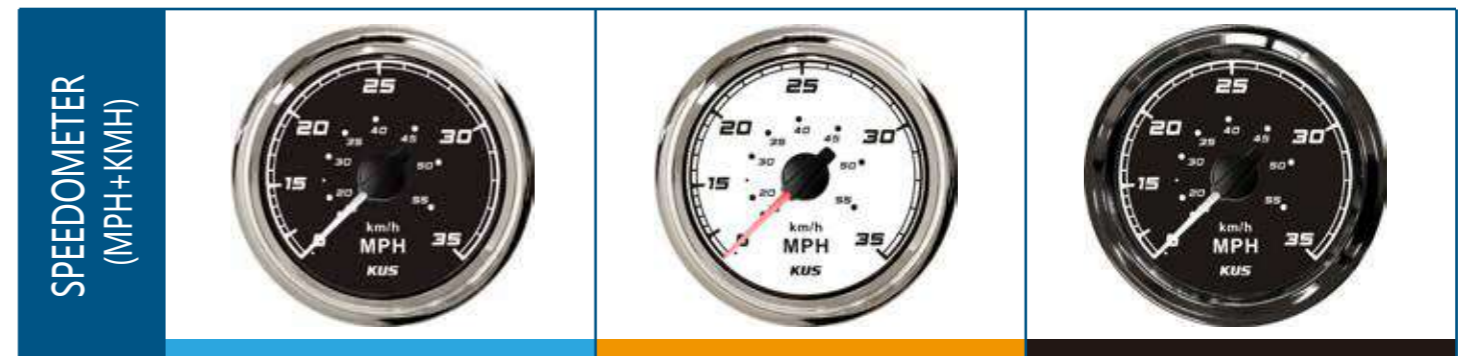
| Art. No. | Model       | Speed Ratio | Picture Indicating | Bezel           | Display Range | Working Voltage | Installation Dimension |
|----------|-------------|-------------|--------------------|-----------------|---------------|-----------------|------------------------|
| JMQ00018 | FMHB-BS-3KL | 1.0~10.0    |                    | SS 316          | 0~3000rpm     | 12V/24V         | Φ85mm                  |
| JMQ00019 | FMHB-WS-3KL |             |                    | SS 316          |               |                 |                        |
| JMQ00020 | FMHB-BN-3KL |             |                    | SS 316 in black |               |                 |                        |
| KF07033  | FMHB-BS-4KL | 1.0~10.0    |                    | SS 316          | 0~4000rpm     |                 |                        |
| JMQ00021 | FMHB-WS-4KL |             |                    | SS 316          |               |                 |                        |
| JMQ00022 | FMHB-BN-4KL |             |                    | SS 316 in black |               |                 |                        |
| KF07035  | FMHB-BS-6KL | 1.0~10.0    |                    | SS 316          | 0~6000rpm     |                 |                        |
| KF07118  | FMHB-WS-6KL |             |                    | SS 316          |               |                 |                        |
| JMQ00023 | FMHB-BN-6KL |             |                    | SS 316 in black |               |                 |                        |
| KF07037  | FMHB-BS-8KL | 1.0~10.0    |                    | SS 316          | 0~8000rpm     |                 |                        |
| KF07119  | FMHB-WS-8KL |             |                    | SS 316          |               |                 |                        |
| JMQ00024 | FMHB-BN-8KL |             |                    | SS 316 in black |               |                 |                        |

\* Note : The speed ratio is adjustable. Alternative ratio range is 1.0~10.0

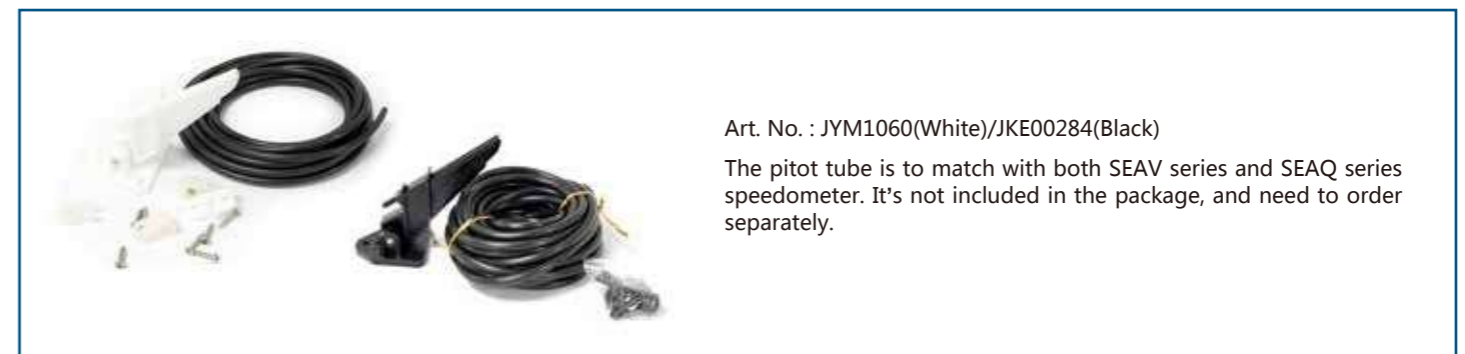


| Art. No. | Model         | Signal | Picture Indicating | Bezel  | Display Range | Working Voltage | Installation Dimension |
|----------|---------------|--------|--------------------|--------|---------------|-----------------|------------------------|
| JMQ00001 | FMRB-BS-0-190 | 0~190Ω |                    | SS 316 | R-L           | 12V/24V         | Φ85mm                  |
| JMQ00002 | FMRB-WS-0-190 |        |                    |        |               |                 |                        |
| JMQ00003 | FMRB-BN-0-190 |        |                    |        |               |                 |                        |

\* The rudder angle can be matched with the KE41000 rudder angle sensor.



| Art. No. | Model      | Signal                               | Picture Indicating | Bezel  | Display Range | Working Voltage | Installation Dimension |
|----------|------------|--------------------------------------|--------------------|--------|---------------|-----------------|------------------------|
| KF18012  | FPOB-BS-35 | Pitot tube provides pressure signals |                    | SS 316 | 0~35MPH       | 12V/24V         | Φ85mm                  |
| KF18108  | FPOB-WS-35 |                                      |                    |        |               |                 |                        |
| KF18013  | FPOB-BN-35 |                                      |                    |        |               |                 |                        |
| KF18014  | FPOB-BS-55 |                                      |                    | SS 316 | 0~55MPH       |                 |                        |
| KF18109  | FPOB-WS-55 |                                      |                    |        |               |                 |                        |
| KF18015  | FPOB-BN-55 |                                      |                    |        |               |                 |                        |
| KF18016  | FPOB-BS-65 |                                      |                    | SS 316 | 0~65MPH       |                 |                        |
| KF18110  | FPOB-WS-65 |                                      |                    |        |               |                 |                        |
| KF18017  | FPOB-BN-65 |                                      |                    |        |               |                 |                        |



Art. No. : JYM1060(White)/JKE00284(Black)

The pitot tube is to match with both SEAV series and SEAQ series speedometer. It's not included in the package, and need to order separately.

# Gauge Panel Series

The marine gauge panels were designed to meet customer needs. Its elegant and simple design allows easy assembly and convenient routine maintenance. Acousto-optic alarming, over current protection, and over voltage protection and other features are integrated in the gauge panel. The gauge panels' color, size, functions and working voltage of 12V or 24V can be customized.



| P/N                    | Gauge Panel   |         |
|------------------------|---|---------|
| Art. No.               | KY89915   | KY89903 |
| Working Voltage        | 12V   | 24V     |
| Matching sensor        | Magnetolectric Tacho Sensor : M16*1.5<br>Water temp. sensor: 90°C alarm, M16*1.5<br>Pressure sensor : 0-10bar, 0.8bar alarm NPT 1/8 |         |
| Installation Dimension | 335*200*125mm   |         |

| P/N                    | Gauge Panel   |  |
|------------------------|---|--|
| Art. No.               | KY89912   |  |
| Working Voltage        | 24V   |  |
| Matching sensor        | Magnetolectric Tacho Sensor : M16*1.5<br>Water temp. sensor: 90°C alarm, M16*1.5<br>Pressure sensor : 0-10bar, 0.8bar alarm NPT 1/8 |  |
| Installation Dimension | 386*198*130mm   |  |

| P/N                    | Gauge Panel                   |  |
|------------------------|-------------------------------|--|
| Art. No.               | JMV00339                      |  |
| Working Voltage        | 12V/24V                       |  |
| Matching sensor        | matched with CAN-BUS protocol |  |
| Installation Dimension | 270*170*70mm                  |  |



| P/N                    | Gauge Panel   |         |
|------------------------|---|---------|
| Art. No.               | KY89911   | KY89910 |
| Working Voltage        | 12V   | 24V     |
| Matching sensor        | Magnetolectric Tacho Sensor : M16*1.5<br>Water temp. sensor: 90°C alarm, M16*1.5<br>Pressure sensor : 0-10bar, 0.8bar alarm NPT 1/8 |         |
| Installation Dimension | 243*196*130mm   |         |

| P/N                    | Gauge Panel   |         |
|------------------------|---|---------|
| Art. No.               | KY89904   | KY89905 |
| Working Voltage        | 12V   | 24V     |
| Matching sensor        | Magnetolectric Tacho Sensor : M16*1.5<br>Water temp. sensor: 90°C alarm, M16*1.5<br>Pressure sensor : 0-10bar, 0.8bar alarm NPT 1/8 |         |
| Installation Dimension | 335*200*125mm   |         |

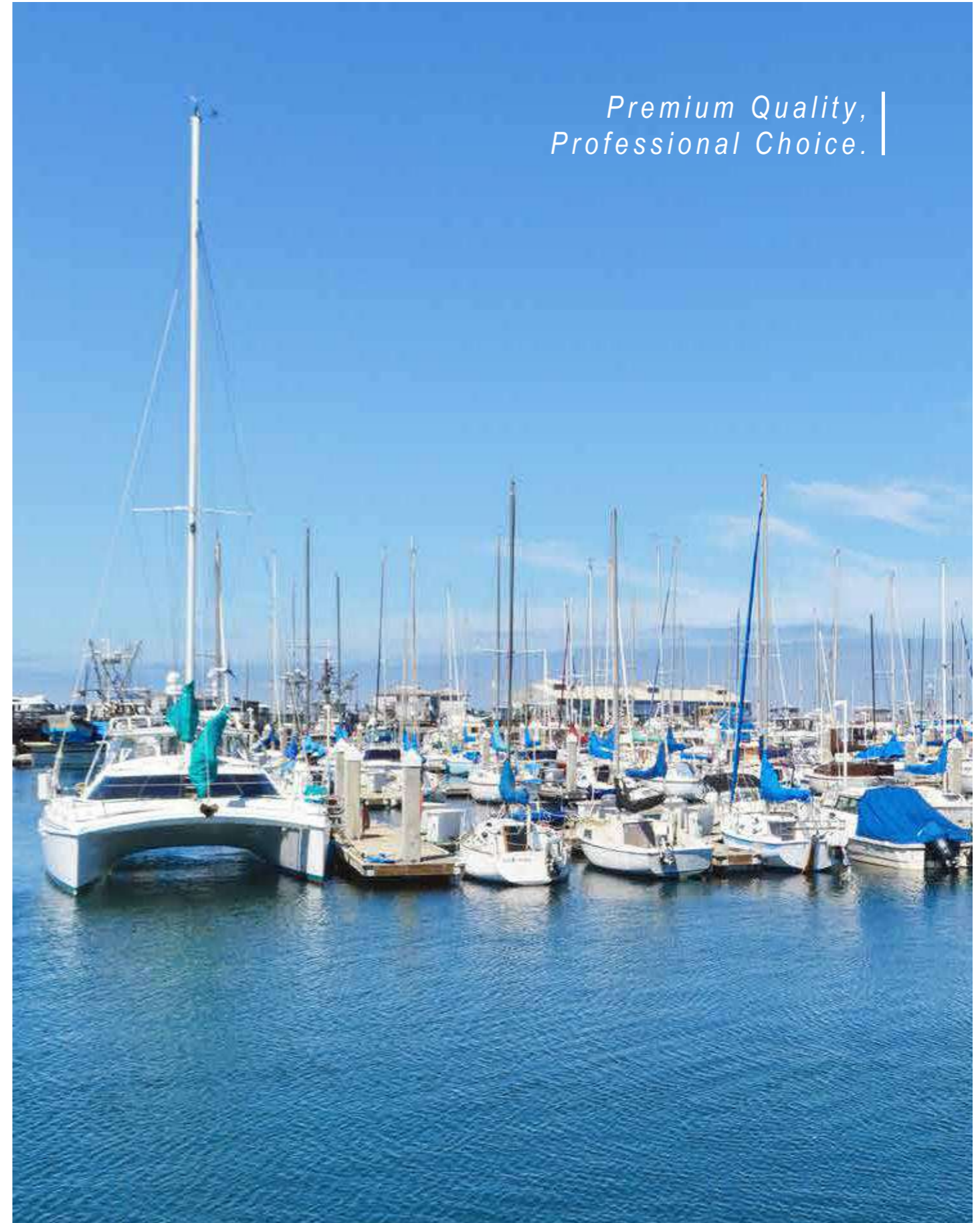
| P/N                    | Gauge Panel |  |
|------------------------|-------------|--|
| Art. No.               | KY89923     |  |
| Working Voltage        | 12V/24V     |  |
| Installation Dimension | 250*190mm   |  |



| P/N                    | KUS-3       |
|------------------------|-------------|
| Art. No.               | KY89929     |
| Working Voltage        | 12V         |
| Installation Dimension | 190*75.5 mm |

| P/N                    | Gauge Panel |
|------------------------|-------------|
| Art. No.               | KY89924     |
| Working Voltage        | 12V/24V     |
| Installation Dimension | 190*88 mm   |

| P/N                    | P2          |
|------------------------|-------------|
| Art. No.               | KY79902     |
| Working Voltage        | 12V         |
| Installation Dimension | 100.5*79 mm |



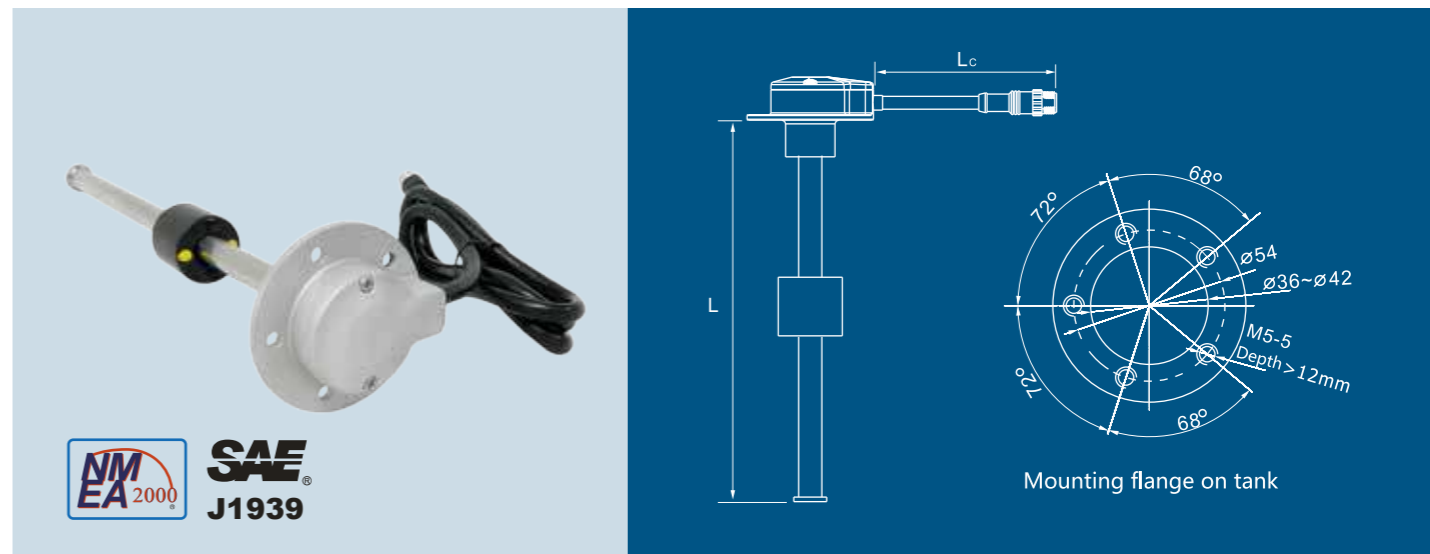
# Sensor Series

Premium Quality, Professional Choice.



## NS5 Series

www.kusauto.comSS



- ◆ Material: The main body is made of SS316 stainless steel
- ◆ Length range: 100 ~ 2000 mm. It also can be customized according to your requirements.
- ◆ Mounting: SAE standard 5 holes, other mounting methods available.
- ◆ Accessories: -5 x M5 screws  
-2 mm thick NBR gasket.  
If installing on a gas tank, we recommend the optional 2mm thick FPM gasket.
- ◆ Protection rank: IP67

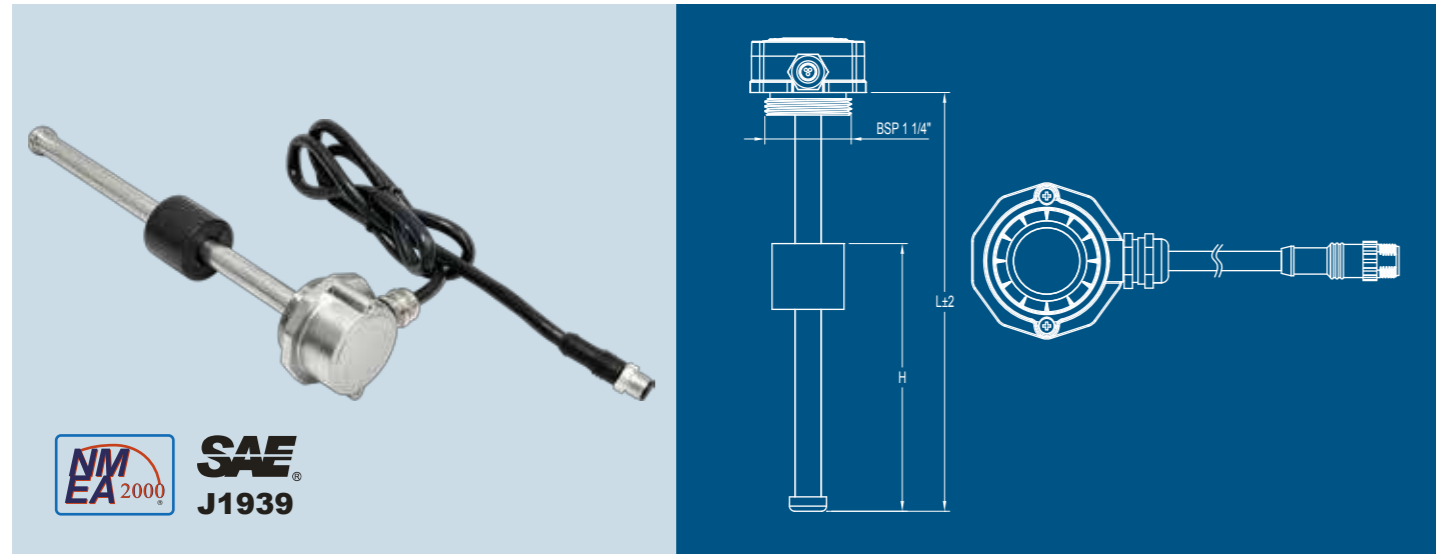
- Utilizing magnetic field to control the reed on-off switch, the product features a long service life and protection against vibration.
- Rated power: 720mW
- Wire: PVC material (PA corrugated pipe cover is optional)
- Connector: Male "Micro-C" Pinout
- Output signal: NMEA 2000/J1939 network messages
- Resolution range: 10~40 mm
- Operating temperature: -30°C~ +80°C

| Art. No. | Product Name | Specification             |
|----------|--------------|---------------------------|
| JKS03922 | NS5-150mm    |                           |
| JKS03923 | NS5-200mm    |                           |
| JKS03924 | NS5-225mm    |                           |
| JKS03925 | NS5-250mm    |                           |
| JKS03926 | NS5-275mm    | Output Signal:            |
| JKS03927 | NS5-300mm    | NMEA2000 Network Messages |
| JKS03928 | NS5-350mm    | Length of wire: 980mm     |
| JKS03929 | NS5-400mm    | Gasket: NBR               |
| JKS03930 | NS5-450mm    | Alarm: No                 |
| JKS03931 | NS5-500mm    | Material: SS316           |
| JKS03932 | NS5-550mm    | Working Voltage: 9-16V    |
| JKS03933 | NS5-600mm    | Logo: KUS                 |
| JKS03934 | NS5-650mm    |                           |
| JKS03935 | NS5-700mm    |                           |
| JKS03936 | NS5-750mm    |                           |
| JKS03937 | NS5-800mm    |                           |

| Art. No. | Product Name | Specification          |
|----------|--------------|------------------------|
| JKS02823 | NS5-150mm    |                        |
| JKS02824 | NS5-200mm    |                        |
| JKS02825 | NS5-225mm    |                        |
| JKS02826 | NS5-250mm    |                        |
| JKS02827 | NS5-275mm    | Output Signal:         |
| JKS02828 | NS5-300mm    | J1939 Network Messages |
| JKS02829 | NS5-350mm    | Length of wire: 980mm  |
| JKS02830 | NS5-400mm    | Gasket: NBR            |
| JKS02831 | NS5-450mm    | Alarm: No              |
| JKS02832 | NS5-500mm    | Material: SS316        |
| JKS02833 | NS5-550mm    | Working Voltage: 9-32V |
| JKS02834 | NS5-600mm    | Logo: KUS              |
| JKS02835 | NS5-650mm    |                        |
| JKS02836 | NS5-700mm    |                        |
| JKS02837 | NS5-750mm    |                        |
| JKS02838 | NS5-800mm    |                        |



# NS3 Series



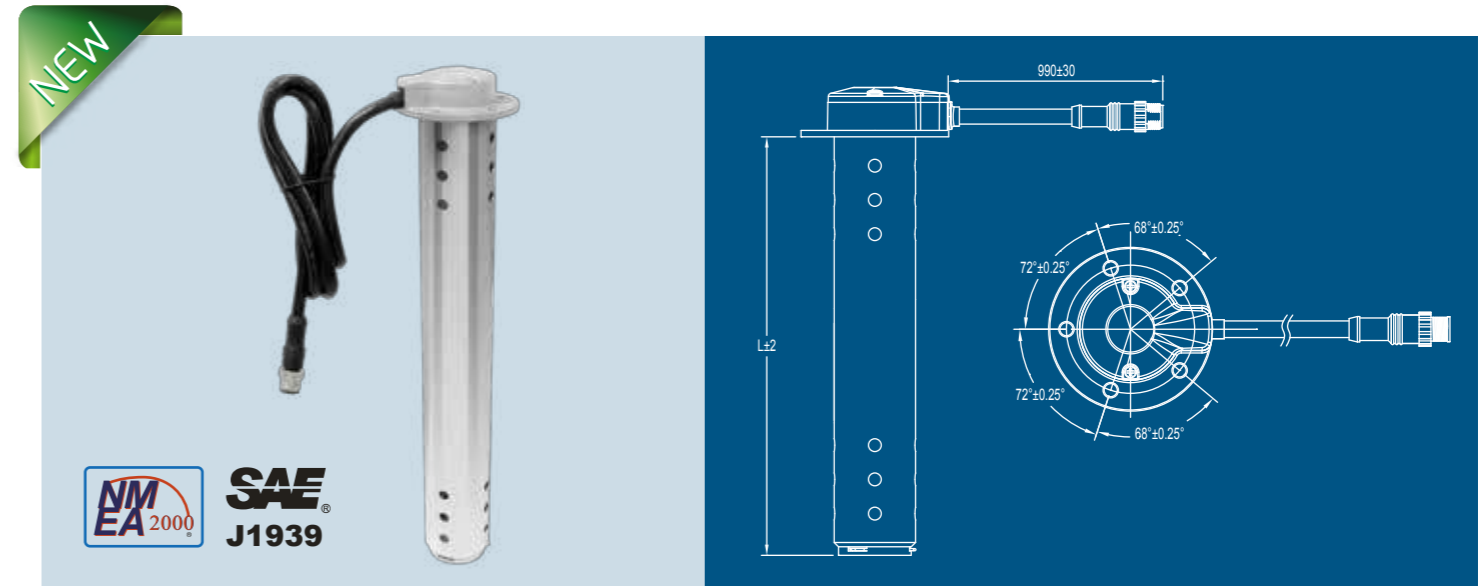
- ◆ **Material:**  
The main body is made of SS316 stainless steel.
- ◆ **Length range:**  
100~2000mm. It also can be customized according to your requirements.
- ◆ **Assembly:**  
BSP 1 1/4" thread twist-in, or NPT thread twist-in. Various types of flanges are available for fitting fuel tank if necessary.
- ◆ **Mounting:**  
-38mm x2.6mm O-ring  
-43mm x3.5mm O-ring
- ◆ **Protection rank:** IP67

- Utilizing magnetic field to control the reed on-off switch, the product features a long service life and protection against vibration.
- **Rated power:** 720mW
- **Wire:** PVC material (PA corrugated pipe cover is optional)
- **Connector:** Male "Micro-C" Pinout
- **Output signal:** NMEA 2000/J1939 network messages
- **Resolution range:** 10~40 mm
- **Operating temperature:** -30°C~+80°C

| Art. No. | Product Name | Specification  |
|----------|--------------|--|
| JKS02789 | NS3-150mm    | Output Signal:<br>NMEA2000 Network Messages<br>Length of wire: 980mm<br>Gasket: NBR<br>Alarm: No<br>Material: SS316<br>Working Voltage: 9-16V<br>Logo: KUS |
| JKS02790 | NS3-200mm    |  |
| JKS02791 | NS3-225mm    |  |
| JKS02792 | NS3-250mm    |  |
| JKS02793 | NS3-275mm    |  |
| JKS02794 | NS3-300mm    |  |
| JKS02795 | NS3-350mm    |  |
| JKS02796 | NS3-400mm    |  |
| JKS02797 | NS3-450mm    |  |
| JKS02798 | NS3-500mm    |  |
| JKS02799 | NS3-550mm    |  |
| JKS02800 | NS3-600mm    |  |
| JKS02801 | NS3-650mm    |  |
| JKS02802 | NS3-700mm    |  |
| JKS02803 | NS3-750mm    |  |
| JKS02804 | NS3-800mm    |  |

| Art. No. | Product Name | Specification   |
|----------|--------------|---|
| JKS02839 | NS3-150mm    | Output Signal:<br>J1939 Network Messages<br>Length of wire: 980mm<br>Gasket: NBR<br>Alarm: No<br>Material: SS316<br>Working Voltage: 9-32V<br>Logo: KUS |
| JKS02840 | NS3-200mm    |   |
| JKS02841 | NS3-225mm    |   |
| JKS02842 | NS3-250mm    |   |
| JKS02843 | NS3-275mm    |   |
| JKS02844 | NS3-300mm    |   |
| JKS02845 | NS3-350mm    |   |
| JKS02846 | NS3-400mm    |   |
| JKS02847 | NS3-450mm    |   |
| JKS02848 | NS3-500mm    |   |
| JKS02849 | NS3-550mm    |   |
| JKS02850 | NS3-600mm    |   |
| JKS02851 | NS3-650mm    |   |
| JKS02852 | NS3-700mm    |   |
| JKS02853 | NS3-750mm    |   |
| JKS02854 | NS3-800mm    |   |

# NS5H Series



- ◆ **Uses:** Mainly used in black water or grey water tanks. Can also be used in fresh water tanks.
- ◆ **Material:**  
The main body is made of SS316 stainless steel.
- ◆ **Length range:**  
100~1500mm. It also can be customized according to your requirements.
- ◆ Using NPT thread to fix and seal the sensor and flange, with addition of Teflon tape belts to seal if necessary.
- ◆ **Mounting:**  
SAE standard 5 holes, other mounting methods available.
- ◆ **Protection rank:** IP67

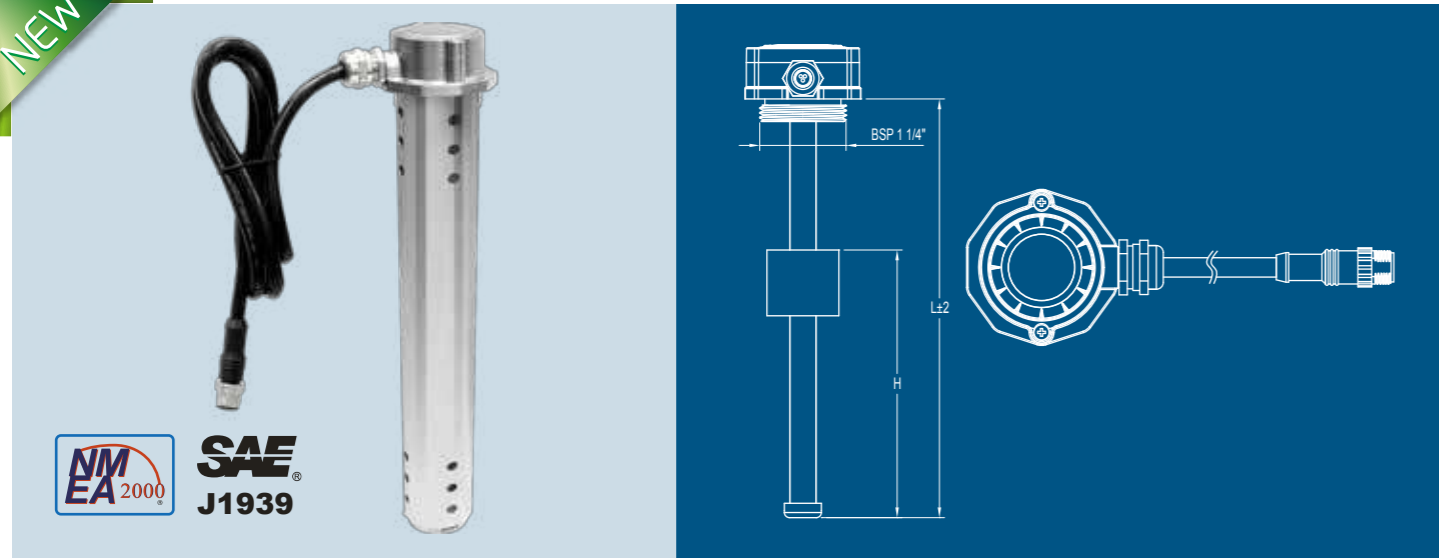
- Utilizing magnetic field to control the reed on-off switch, the product features a long service life and protection against vibration.
- **Rated power:** 720mW
- **Wire:** PVC material (PA corrugated pipe cover is optional)
- **Connector:** Male "Micro-C" Pinout
- **Output signal:** NMEA 2000/J1939 network messages
- **Resolution range:** 10~40 mm
- **Operating temperature:** -30°C~+80°C

| Art. No. | Product Name | Specification  |
|----------|--------------|--|
| JKS03753 | NS5H-150mm   | Output Signal:<br>NMEA2000 Network Messages<br>Length of wire: 980mm<br>Gasket: NBR<br>Alarm: No<br>Material: SS316<br>Working Voltage: 9-16V<br>Logo: KUS |
| JKS03754 | NS5H-200mm   |  |
| JKS03755 | NS5H-225mm   |  |
| JKS03756 | NS5H-250mm   |  |
| JKS03757 | NS5H-275mm   |  |
| JKS03758 | NS5H-300mm   |  |
| JKS03759 | NS5H-350mm   |  |
| JKS03760 | NS5H-400mm   |  |
| JKS03761 | NS5H-450mm   |  |
| JKS03762 | NS5H-500mm   |  |
| JKS03763 | NS5H-550mm   |  |
| JKS03764 | NS5H-600mm   |  |
| JKS03765 | NS5H-650mm   |  |
| JKS03766 | NS5H-700mm   |  |
| JKS03767 | NS5H-750mm   |  |
| JKS03768 | NS5H-800mm   |  |

| Art. No. | Product Name | Specification   |
|----------|--------------|---|
| JKS03769 | NS5H-150mm   | Output Signal:<br>J1939 Network Messages<br>Length of wire: 980mm<br>Gasket: NBR<br>Alarm: No<br>Material: SS316<br>Working Voltage: 9-32V<br>Logo: KUS |
| JKS03770 | NS5H-200mm   |   |
| JKS03771 | NS5H-225mm   |   |
| JKS03772 | NS5H-250mm   |   |
| JKS03773 | NS5H-275mm   |   |
| JKS03774 | NS5H-300mm   |   |
| JKS03775 | NS5H-350mm   |   |
| JKS03776 | NS5H-400mm   |   |
| JKS03777 | NS5H-450mm   |   |
| JKS03778 | NS5H-500mm   |   |
| JKS03779 | NS5H-550mm   |   |
| JKS03780 | NS5H-600mm   |   |
| JKS03781 | NS5H-650mm   |   |
| JKS03782 | NS5H-700mm   |   |
| JKS03783 | NS5H-750mm   |   |
| JKS03784 | NS5H-800mm   |   |

# NS3H Series

# S5 Series

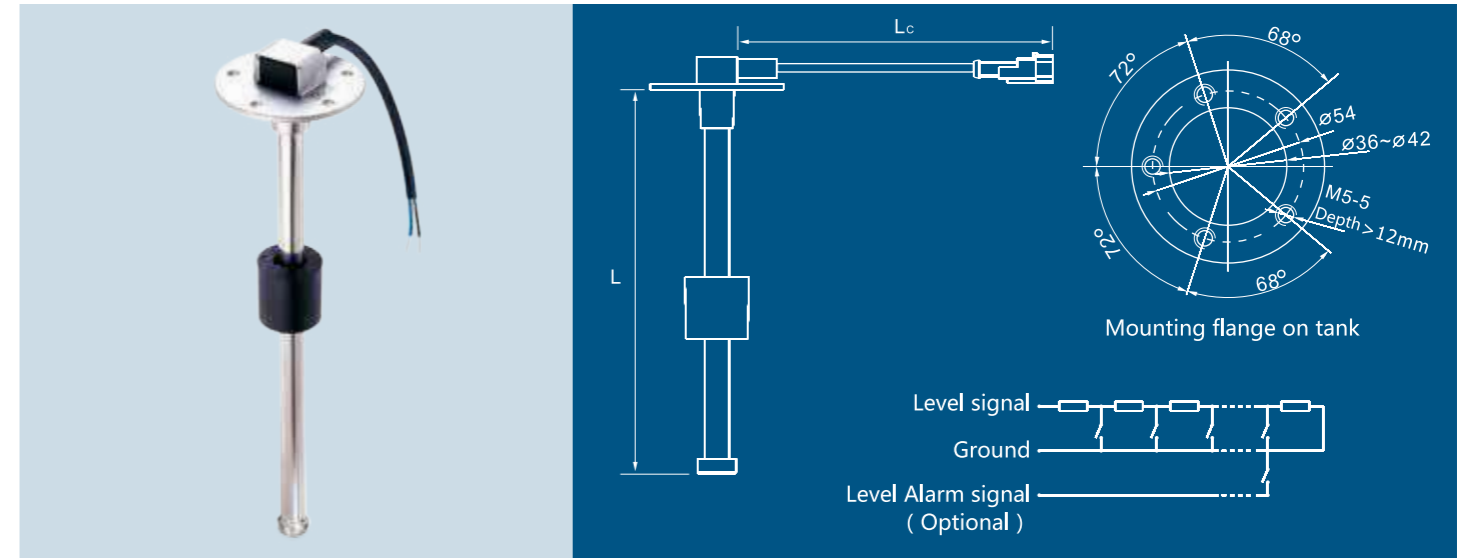


- ◆ **Material:**  
The main body is made of SS316 stainless steel.
- ◆ **Length range:**  
100~1500mm. It also can be customized according to your requirements.
- ◆ **Assembly:**  
BSP 1 1/4" thread twist-in, or NPT thread twist-in. Various types of flanges are available for fitting fuel tank if necessary.
- ◆ **Mounting:**  
-38mm x2.6mm O-ring  
-43mm x3.5mm O-ring
- ◆ The outer tube can be detached for easy cleaning.
- ◆ Protection rank: IP67

- Utilizing magnetic field to control the reed on-off switch, the product features a long service life and protection against vibration.
- Rated power: 720mW
- Wire: PVC material (PA corrugated pipe cover is optional)
- Connector: Male "Micro-C" Pinout
- Output signal: NMEA 2000/J1939 network messages
- Resolution range: 10~40 mm
- Operating temperature: -30°C~+80°C

| Art. No. | Product Name | Specification  |
|----------|--------------|--|
| JKS03721 | NS3H-150mm   | Output Signal:<br>NMEA2000 Network Messages<br>Length of wire: 980mm<br>Gasket: NBR<br>Alarm: No<br>Material: SS316<br>Working Voltage: 9-16V<br>Logo: KUS |
| JKS03722 | NS3H-200mm   |  |
| JKS03723 | NS3H-225mm   |  |
| JKS03724 | NS3H-250mm   |  |
| JKS03725 | NS3H-275mm   |  |
| JKS03726 | NS3H-300mm   |  |
| JKS03727 | NS3H-350mm   |  |
| JKS03728 | NS3H-400mm   |  |
| JKS03729 | NS3H-450mm   |  |
| JKS03730 | NS3H-500mm   |  |
| JKS03731 | NS3H-550mm   |  |
| JKS03732 | NS3H-600mm   |  |
| JKS03733 | NS3H-650mm   |  |
| JKS03734 | NS3H-700mm   |  |
| JKS03735 | NS3H-750mm   |  |
| JKS03736 | NS3H-800mm   |  |

| Art. No. | Product Name | Specification   |
|----------|--------------|---|
| JKS03737 | NS3H-150mm   | Output Signal:<br>J1939 Network Messages<br>Length of wire: 980mm<br>Gasket: NBR<br>Alarm: No<br>Material: SS316<br>Working Voltage: 9-32V<br>Logo: KUS |
| JKS03738 | NS3H-200mm   |   |
| JKS03739 | NS3H-225mm   |   |
| JKS03740 | NS3H-250mm   |   |
| JKS03741 | NS3H-275mm   |   |
| JKS03742 | NS3H-300mm   |   |
| JKS03743 | NS3H-350mm   |   |
| JKS03744 | NS3H-400mm   |   |
| JKS03745 | NS3H-450mm   |   |
| JKS03746 | NS3H-500mm   |   |
| JKS03747 | NS3H-550mm   |   |
| JKS03748 | NS3H-600mm   |   |
| JKS03749 | NS3H-650mm   |   |
| JKS03750 | NS3H-700mm   |   |
| JKS03751 | NS3H-750mm   |   |
| JKS03752 | NS3H-800mm   |   |



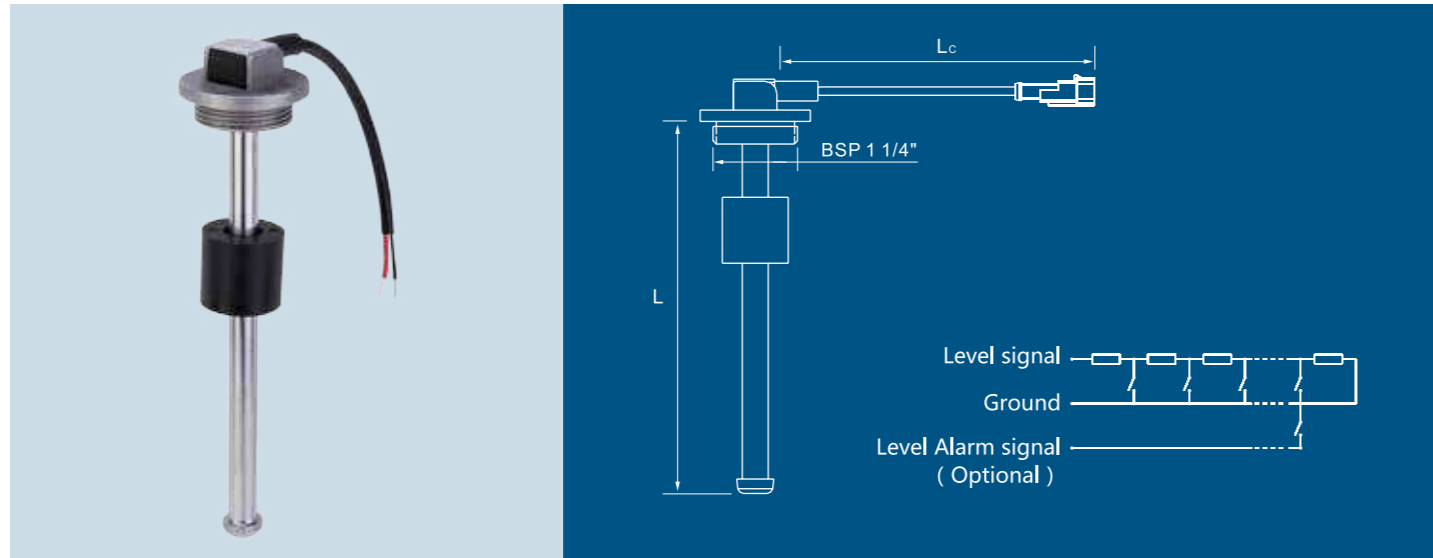
- ◆ **Material:** The main body is made of SS316 or SS304 stainless steel
- ◆ **Length range:**  
100 ~ 2000 mm. It also can be customized according to your requirements.
- ◆ **Mounting:**  
SAE standard 5 holes, other mounting methods available.
- ◆ **Accessories:**  
-5 x M5 screws  
-2 mm thick NBR gasket.  
If installing on a gas tank, we recommend the optional 2mm thick FPM gasket.
- ◆ Protection rank: IP67

- Utilizing magnetic field to control the reed on-off switch, the product features a long service life and protection against vibration.
- Rated power: 125mW
- Max current: 500mA
- Wire: PVC material (PA corrugated pipe cover is optional)
- Connector: Delphi, Tyco, or others are available according to customer's requirements.
- **Output signal:**  
Resistance control signal, 0~190Ω , 240~33Ω, or customized as required; You can also choose current control signal, 0~20mA, 4~20mA or Voltage control signal, 0.5~4.5VDC, 0~5VDC.
- Resolution range: 10~40mm
- Operating temperature: -40°C ~+85°C



\* Please contact us for more details.

# S3 Series



- ◆ Material: The main body is made of SS316 or SS304 stainless steel
- ◆ Length range: 100~2000mm. It also can be customized according to your requirements.
- ◆ Assembly: BSP 1 1/4" thread twist-in, or NPT thread twist-in. Various types of flanges are available for fitting fuel tank if necessary.
- ◆ Mounting: -38mm×2.6mm O-ring  
-43mm×3.5mm O-ring
- ◆ Protection rank: IP67
- Utilizing magnetic field to control the reed on-off switch, the product features a long service life and protection against vibration.
- Rated power: 125mW
- Max current: 500mA
- Wire: PVC material (PA corrugated pipe cover is optional)
- Connector: Delphi, Tyco, or others are available according to customer's requirements.
- Output signal: Resistance control signal, 0~190Ω, 240~33Ω, or customized as required; You can also choose current control signal, 0~20mA, 4~20mA or Voltage control signal, 0.5~4.5VDC, 0~5VDC.
- Resolution range: 10~40mm
- Operating temperature: -40°C ~ +85°C

KUS is the world's leading supplier of multipurpose level sensors. Every year more than a million KUS sensors are installed in boats, trucks and off-road equipments all over the world. Measurements are done by series of reed switches positioned inside the level tube. The float is the only moving part of the sensor, thereby minimizes potential mechanical failures. These features contribute to the the sensor's precise level measurements.



\* Please contact us for more details.

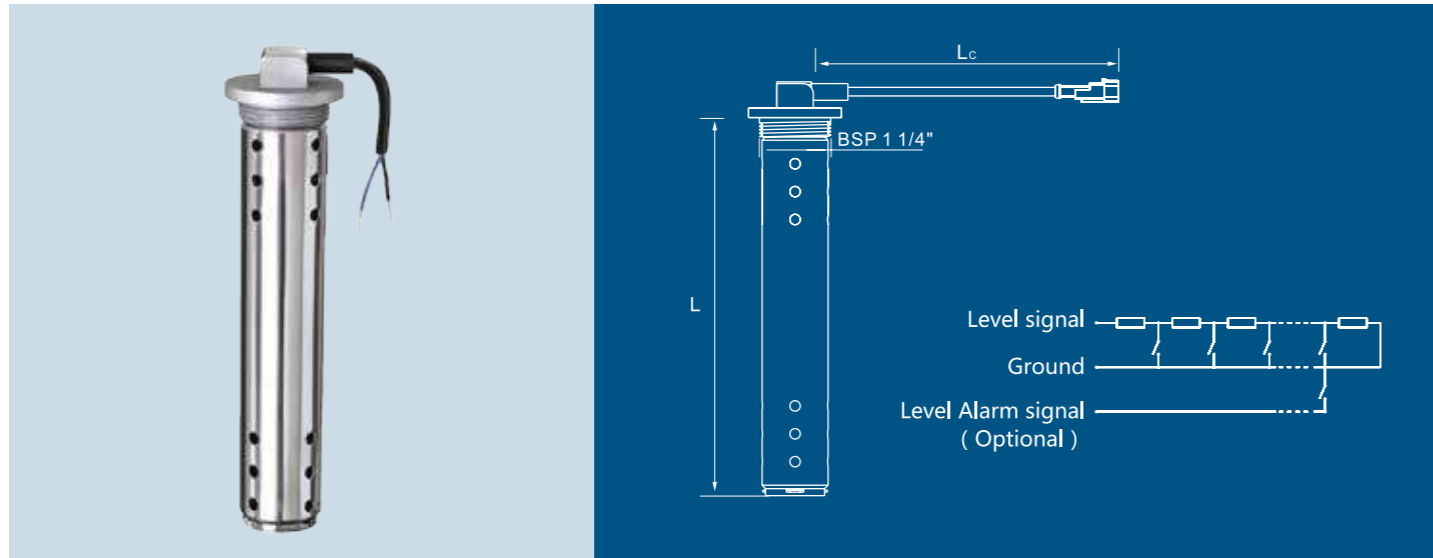
# S5/S3 Series

| Art. No. | Product Name | Specification   | Art. No.   | Product Name | Specification  |
|----------|--------------|---|------------|--------------|--|
| JS60055  | S5-E150mm    | Output Signal : 0~190Ω<br>Mounting :<br>SAE standard 5 holes<br>Length of Wire : 460mm<br>Gasket : NBR<br>Alarm : No<br>Material: SS316<br>Logo : KUS   | JS61043    | S3-E150mm    | Output Signal : 0~190Ω<br>Mounting :<br>BSP 1 1/4" Thread<br>Length of Wire : 460mm<br>Gasket : NBR<br>Alarm : No<br>Material : SS316<br>Logo : KUS  |
| JS60057  | S5-E200mm    |   | JS61045    | S3-E200mm    |  |
| JS60059  | S5-E250mm    |   | JS61047    | S3-E250mm    |  |
| JS60061  | S5-E300mm    |   | JS61049    | S3-E300mm    |  |
| JS60063  | S5-E400mm    |   | JS61051    | S3-E400mm    |  |
| JS60065  | S5-E500mm    |   | JS61053    | S3-E500mm    |  |
| JS60067  | S5-E600mm    |   | JS61055    | S3-E600mm    |  |
| JS60069  | S5-E700mm    |   | JS61057    | S3-E700mm    |  |
| JS60071  | S5-E800mm    |   | JS61059    | S3-E800mm    |  |
| JS60073  | S5-E900mm    |   | JS61061    | S3-E900mm    |  |
| JS60075  | S5-E1000mm   |   | JS61063    | S3-E1000mm   |  |
| JS60076  | S5-E1100mm   |   | JS61064    | S3-E1100mm   |  |
| JS60077  | S5-E1200mm   |   | JS61065    | S3-E1200mm   |  |
| JS60078  | S5-E1300mm   |   | JS61066    | S3-E1300mm   |  |
| JS60079  | S5-E1400mm   |   | JS61067    | S3-E1400mm   |  |
| JS60080  | S5-E1500mm   |   | JS61068    | S3-E1500mm   |  |
| JS60081  | S5-E1600mm   | JS61069   | S3-E1600mm |              |  |
| JS60334  | S5-U150mm    | Output Signal : 240~33Ω<br>Mounting :<br>SAE standard 5 holes<br>Length of Wire : 280mm<br>Gasket : NBR<br>Alarm : No<br>Material : SS316<br>Logo : KUS | JS61368    | S3-U150mm    | Output Signal : 240~33Ω<br>Mounting :<br>BSP 1 1/4" Thread<br>Length of Wire : 280mm<br>Gasket : NBR<br>Alarm : No<br>Material : SS316<br>Logo : KUS |
| JS60336  | S5-U200mm    |   | JS61332    | S3-U200mm    |  |
| JS60338  | S5-U250mm    |   | JS61334    | S3-U250mm    |  |
| JS60340  | S5-U300mm    |   | JS61336    | S3-U300mm    |  |
| JS60342  | S5-U400mm    |   | JS61338    | S3-U400mm    |  |
| JS60344  | S5-U500mm    |   | JS61340    | S3-U500mm    |  |
| JS60346  | S5-U600mm    |   | JS61342    | S3-U600mm    |  |
| JS60348  | S5-U700mm    |   | JS61344    | S3-U700mm    |  |
| JS60350  | S5-U800mm    |   | JS61346    | S3-U800mm    |  |
| JS60352  | S5-U900mm    |   | JS61348    | S3-U900mm    |  |
| JS60354  | S5-U1000mm   |   | JS61350    | S3-U1000mm   |  |
| JS60355  | S5-U1100mm   |   | JS61351    | S3-U1100mm   |  |
| JS60356  | S5-U1200mm   |   | JS61352    | S3-U1200mm   |  |
| JS60357  | S5-U1300mm   |   | JS61353    | S3-U1300mm   |  |
| JS60358  | S5-U1400mm   |   | JS61354    | S3-U1400mm   |  |
| JS60359  | S5-U1500mm   |   | JS61355    | S3-U1500mm   |  |
| JS60360  | S5-U1600mm   | JS61356   | S3-U1600mm |              |  |

\* Optional Flange :  
Please refer to page 56 "Flange for mounting"

Remark: The length can be customized according to the tank height.

# S3HT Series



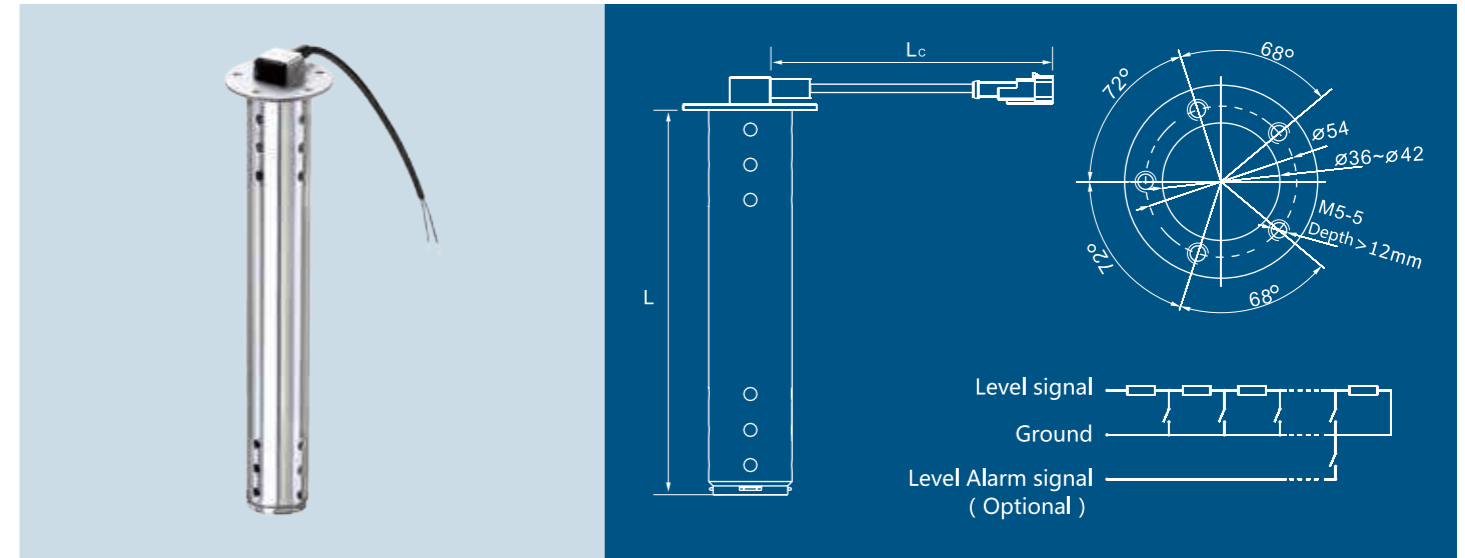
- ◆ Material: The main body is made of stainless SS316
- ◆ Length range: 4" , 6" , 8" , 12" , 16" It can also be customized according to your requirements.
- ◆ Assembly: Various types of flanges is available for fitting fuel tank if necessary.
- ◆ Mounting:
  - 38mm×2.6mm O-ring,
  - 43mm×3.5mm O-ring.
- ◆ The outer tube can be detached for easy cleaning.
- ◆ Protection rank: IP67
- Utilizing magnetic field to control the reed on-off switch, the product features a long service life and protection against vibration.
- Rated power: 125mW
- Max current: 500mA
- Wire: PVC material (PA corrugated pipe cover is optional)
- Connector: Delphi, Tyco, or others are available according to customer's requirements.
- Output signal: Resistance control signal, 0~190Ω , 240~33Ω, or customized as required; You can also choose current control signal, 0~20mA, 4~20mA or Voltage control signal, 0.5~4.5VDC, 0~5VDC.
- Resolution range: 10~40mm
- Operating temperature: -40°C ~ +85°C

| Art. No. | Length(mm) | Specification  |
|----------|------------|--|
| JS63186  | S3HT-U150  | Output : 240~33Ω<br>Mounting : BSP 1 1/4" Thread<br>Gasket : NBR<br>Length of wire : 280 mm<br>Material: SS316<br>Logo : KUS<br>Length of Sensor: Customized |
| JS63187  | S3HT-U175  |  |
| JS63062  | S3HT-U200  |  |
| JS63188  | S3HT-U225  |  |
| JS63189  | S3HT-U250  |  |
| JS63203  | S3HT-U275  |  |
| JS63063  | S3HT-U300  |  |
| JS63014  | S3HT-U350  |  |
| JS63064  | S3HT-U400  |  |
| JS63190  | S3HT-U450  |  |
| JS63191  | S3HT-U500  |  |

| Art. No. | Length(mm) | Specification   |
|----------|------------|---|
| JS63171  | S3HT-E150  | Output : 0~190Ω<br>Mounting : BSP 1 1/4" Thread<br>Gasket : NBR<br>Length of wire : 280 mm<br>Material: SS316<br>Logo : KUS<br>Length of Sensor: Customized |
| JS63172  | S3HT-E175  |   |
| JS63173  | S3HT-E200  |   |
| JS63174  | S3HT-E225  |   |
| JS63148  | S3HT-E250  |   |
| JS63205  | S3HT-E275  |   |
| JS63149  | S3HT-E300  |   |
| JS63089  | S3HT-E350  |   |
| JS63146  | S3HT-E400  |   |
| JS63175  | S3HT-E450  |   |
| JS63152  | S3HT-E500  |   |

\* Please contact us for more details.

# S5H Series



- ◆ Uses: Mainly used in black water or grey water tanks. Can also be used in fresh water tanks.
- ◆ Material: The main body is made of SS316 stainless steel.
- ◆ Length range: 4" , 6" , 8" , 12" , 16" , 20" , 30" It can also be customized according to your requirements.
- ◆ Mounting: SAE standard 5 holes, other mounting methods available.
- ◆ Using NPT thread to fix and seal the sensor and flange, with addition of Teflon tape belts to seal if necessary.
- ◆ Protection rank: IP67
- Utilizing magnetic field to control the reed on-off switch, the product features a long service life and protection against vibration.
- Rated power: 125mW
- Max current: 500mA
- Wire: PVC material (PA corrugated pipe cover is optional)
- Connector: Delphi, Tyco, or others are available according to customer's requirements.
- Output signal: Resistance control signal, 0~190Ω , 240~33Ω, or customized as required; You can also choose current control signal, 0~20mA, 4~20mA or Voltage control signal, 0.5~4.5VDC, 0~5VDC.
- Resolution range: 10~40mm
- Operational temperature: -40°C ~ +85°C

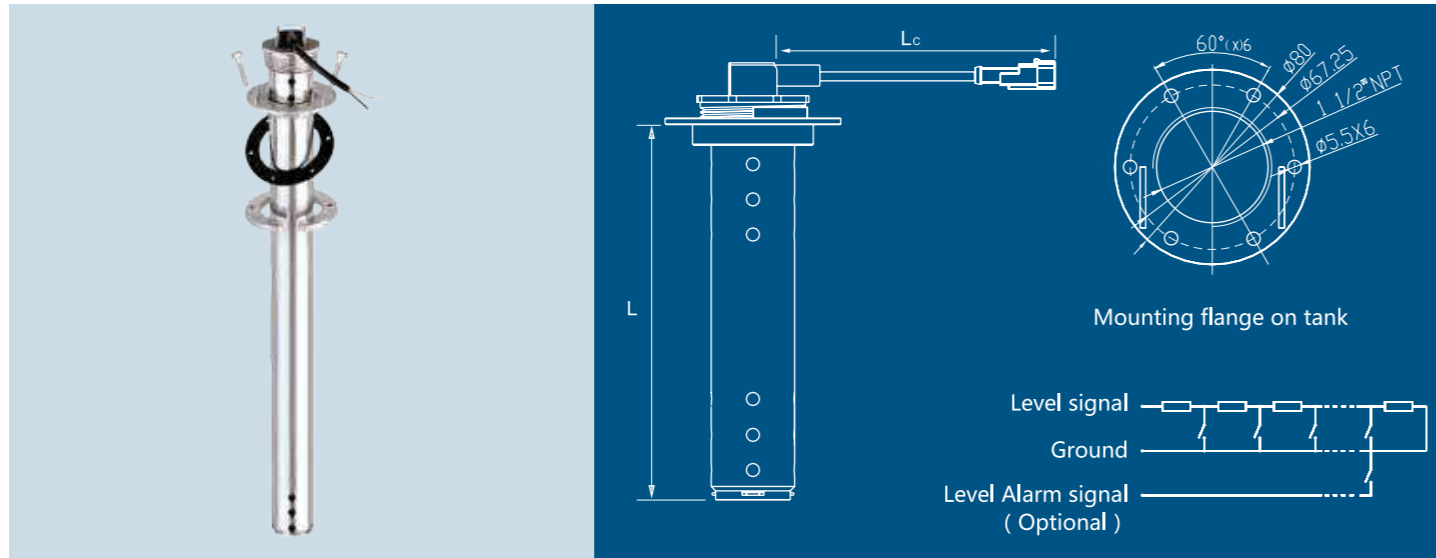
| Art. No. | Length(mm) | Specification  |
|----------|------------|--|
| JKS00103 | S5H-U150   | Output : 240~33Ω<br>Mounting : SAE standard 5 holes<br>Gasket : NBR<br>Length of wire : 460mm<br>Material: SS316<br>Logo : KUS<br>Length of Sensor: Customized |
| JKS00104 | S5H-U175   |  |
| JKS00105 | S5H-U200   |  |
| JKS00106 | S5H-U225   |  |
| JKS00107 | S5H-U250   |  |
| JKS00108 | S5H-U275   |  |
| JKS00109 | S5H-U300   |  |
| JKS00110 | S5H-U350   |  |
| JKS00111 | S5H-U400   |  |
| JKS00112 | S5H-U450   |  |
| JKS00113 | S5H-U500   |  |

| Art. No. | Length(mm) | Specification   |
|----------|------------|---|
| JKS00092 | S5H-E150   | Output : 0~190Ω<br>Mounting : SAE standard 5 holes<br>Gasket : NBR<br>Length of wire : 460mm<br>Material: SS316<br>Logo : KUS<br>Length of Sensor: Customized |
| JKS00093 | S5H-E175   |   |
| JKS00094 | S5H-E200   |   |
| JKS00095 | S5H-E225   |   |
| JKS00096 | S5H-E250   |   |
| JKS00097 | S5H-E275   |   |
| JKS00098 | S5H-E300   |   |
| JKS00099 | S5H-E350   |   |
| JKS00100 | S5H-E400   |   |
| JKS00101 | S5H-E450   |   |
| JKS00102 | S5H-E500   |   |

\* Please contact us for more details.

Note: The above items are without flange, but we can offer optional flange, refer to JSM1714 on page 56.

# SHS Series



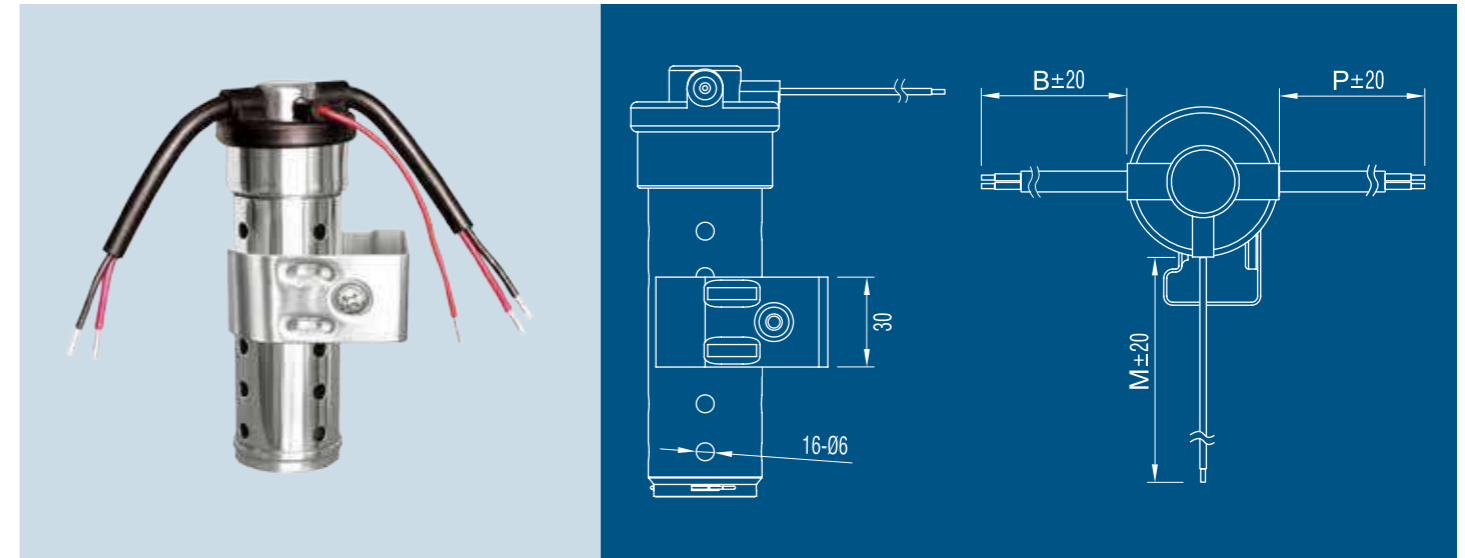
- ◆ Uses: Mainly used in black water or grey water tanks. Can also be used in fresh water tanks.
- ◆ Material: The main body is made of SS316 stainless steel.
- ◆ Length range: 4", 6", 8", 12", 16", 20", 30" It can also be customized according to your requirements.
- ◆ Mounting: NPT 1 1/2" thread twist-in, with standard 6 hole thread flange plate, standard 6 hole under ring and 6 piece of M5×30 screws.
- ◆ Using NPT thread to fix and seal the sensor and flange, with addition of Teflon tape belts to seal if necessary.
- ◆ Protection rank: IP67
- Utilizing magnetic field to control the reed on-off switch, the product features a long service life and protection against vibration.
- Rated power: 125mW
- Max current: 500mA
- Wire: PVC material (PA corrugated pipe cover is optional)
- Connector: Delphi, Tyco, or others are available according to customer's requirements.
- Output signal: Resistance control signal, 0~190Ω, 240~33Ω, or customized as required; You can also choose current control signal, 0~20mA, 4~20mA or Voltage control signal, 0.5~4.5VDC, 0~5VDC.
- Resolution range: 10~40mm
- Operational temperature: -40°C ~ +85°C

| Art. No. | Length(mm) | Specification  |
|----------|------------|--|
| JKS00126 | SHS-U150   | Output : 240~33Ω<br>Mounting : NPT 1 1/2"<br>Gasket : NBR<br>Length of wire : 460mm<br>Material : SS316<br>Logo : KUS<br>Length of Sensor: Customized<br>With flange |
| JKS00127 | SHS-U175   |  |
| JKS00128 | SHS-U200   |  |
| JKS00129 | SHS-U225   |  |
| JKS00130 | SHS-U250   |  |
| JKS00131 | SHS-U275   |  |
| JKS00132 | SHS-U300   |  |
| JKS00133 | SHS-U350   |  |
| JKS00134 | SHS-U400   |  |
| JKS00135 | SHS-U450   |  |
| JKS00136 | SHS-U500   |  |

| Art. No. | Length(mm) | Specification   |
|----------|------------|---|
| JKS00115 | SHS-E150   | Output : 0~190Ω<br>Mounting : NPT 1 1/2"<br>Gasket : NBR<br>Length of wire : 460mm<br>Material : SS316<br>Logo : KUS<br>Length of Sensor: Customized<br>With flange |
| JKS00116 | SHS-E175   |   |
| JKS00117 | SHS-E200   |   |
| JKS00118 | SHS-E225   |   |
| JKS00119 | SHS-E250   |   |
| JKS00120 | SHS-E275   |   |
| JKS00121 | SHS-E300   |   |
| JKS00122 | SHS-E350   |   |
| JKS00123 | SHS-E400   |   |
| JKS00124 | SHS-E450   |   |
| JKS00125 | SHS-E500   |   |

\* Please contact us for more details.

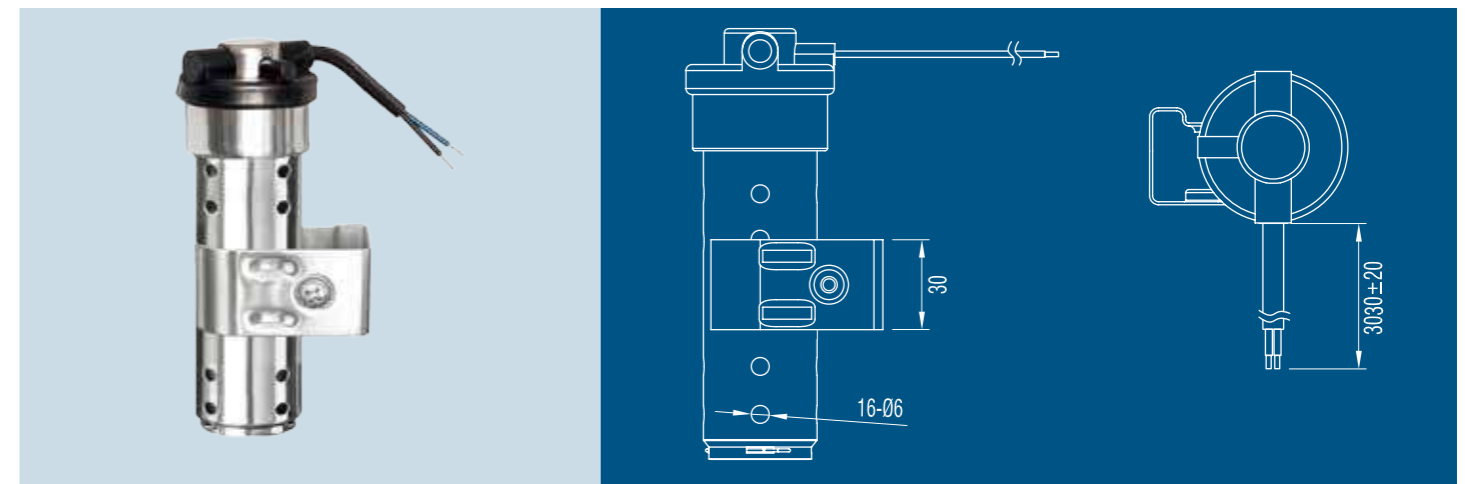
# PBK Series



- ◆ Standard length is 4", length can also be customized. Rating working voltage can be 12V or 24V. single core wire can be used, and pump switch can be operated manually.
- This device is for detecting water level at the bottom of your boat, can also be used as a pump switch by manual operation. It can be installed at the bottom wherever is convenient. Adjustable bracket is to fix the sensor in place and slight adjustment of height. The housing, which can be conveniently disassembled and cleaned, can prevent foreign particles from interfering with the float's movement.

| Art. No.   | Length     | Voltage    | Mounting          | Gasket  | Connector | Length Of Wire(Lc)           | Material   |
|------------|------------|------------|-------------------|---------|-----------|------------------------------|------------|
| JS65120    | 100 mm     | 24V        | BSP 1 1/4" Thread | NBR     | NO        | B:3000 mm P:800 mm M:3000 mm | SS 316     |
| JS50639    | 100 mm     | 12V        | BSP 1 1/4" Thread | NBR     | YES       | B:600 mm P:330 mm M:620 mm   | SS 316     |
| Customized | Customized | Customized | Customized        | NBR/FPM | YES/NO    | Customized                   | Customized |

# OVG Series



- ◆ Standard length is 4", length can also be customized. Rating working voltage can be 12V or 24V. single core wire can be used, and pump switch can be operated manually.
- The function of OVG is same as the PBK, it can also be used as a pump switch but by automatically.

| Art. No.   | Length     | Voltage    | Mounting          | Gasket  | Connector | Length Of Wire(Lc) | Material   |
|------------|------------|------------|-------------------|---------|-----------|--------------------|------------|
| JS65121    | 100 mm     | 24V/12V    | BSP 1 1/4" Thread | NBR     | NO        | 3030 mm            | SS 316     |
| Customized | Customized | Customized | Customized        | NBR/FPM | YES/NO    | Customized         | Customized |

## EA Converter

## SAB high/Low level alarm



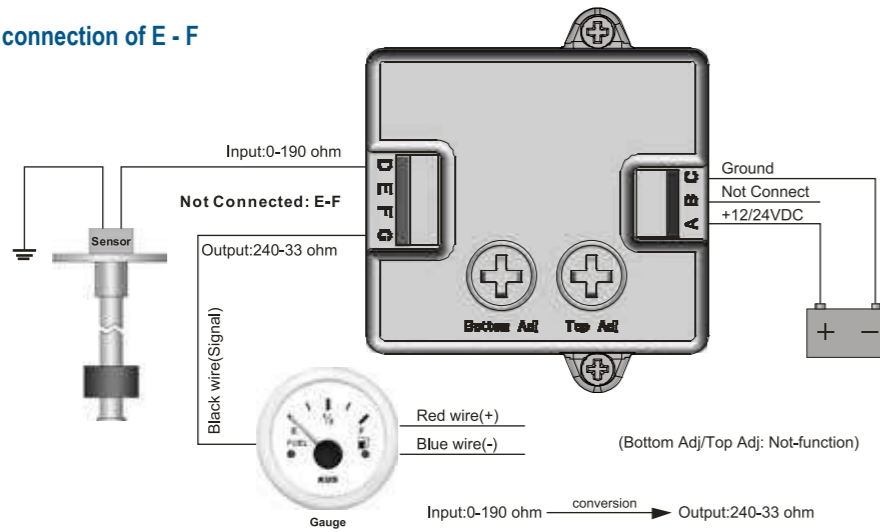
Art. No.: JKE00473  
**If E-F end short circuit :**  
 Input : 240-33 ohm-----Output : 0-190 ohm  
**If E-F end off :**  
 Input : 0-190 ohm-----Output : 240-33 ohm

Product Description:  
 Connects sensor with gauge resistance signal that doesn't match

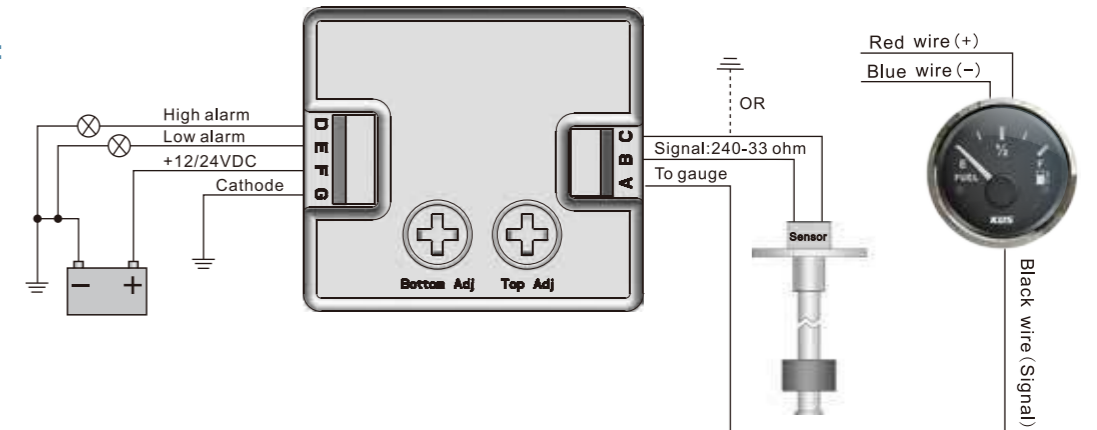


Art. No.: JKE00023  
 Product feature:  
 This product allows the user to add a high and low level alarm signal to the control and monitoring system. The high/low level alarm position could be adjusted by turning the two adjusting knobs. This product must be used with sending units with alarm function.

Please note that the connection of E - F



Connection diagram:



|             |             |   |  |   |  |   |  |                           |
|-------------|-------------|---|--|---|--|---|--|---------------------------|
| Pictures    |             |   |  |   |  |   |  |                           |
| Model       | Flange      | Flange                                  | Flange   | Flange                                    | HFL  | FL-2  | Buzzer   |                           |
| Art. No.    | JSM0893     | JSA0054                                 | JSM0319  | JSM0884                                   | JS21880                                      | JSM1714   | JSP00172   | 162011                    |
| Description | SAE 5 holes | Alu. flange for 1-1/4" BSP tank sensors | Stainless steel weld flange for 1-1/4" BSP tank sensors S3HT/ S3 | Iron SAE 5 holes weld flange for S3HT/ S3 | SAE 5 holes of C-ring flange for S5 sensors. | Tooside/underside kit to suit S3HT 1-1/4" BSP waste sensors | Tooside flange to adapt S3 1-1/4" BSP to SAE 5 holes | Buzzers with 6.3mm faston |

\* KUS also offers various flanges for connection between the tank and sensor, such as standard SAE flanges and BSP thread flanges. One can choose between flange/accessories made of stainless steel, aluminum or engineered plastic.

\* Please contact us for more details.

## Rudder angle sensor

Rudder sensor is usually installed on the sternward rudder horn to collect signals by wire resistor. These sensors are made of materials of the highest quality.

| Art. No. | Output                 | Connecting wires | Connecting Gauges |
|----------|------------------------|------------------|-------------------|
| KE41000  | Single output : 0-190Ω | 2 wires          | 1 Gauge           |
| JZM6470  | Double output : 0-190Ω | 3 wires          | 2 Gauges          |



Art. No. : JSM4480

Rudder sensor is attached to the cylinder of the steering rudder. Signal output is via integrated reed switches. Sensor is durable and can be easily assembled.



Art. No. : KE41002

The rudder sensor is made of highest quality with 10 meter wires. Turn the rudder controller (Steering wheel) to the middle position, and quickly press down the key, it will record the corresponding position of the rudder sensor when the rudder is in the middle position.



## Tacho sensor



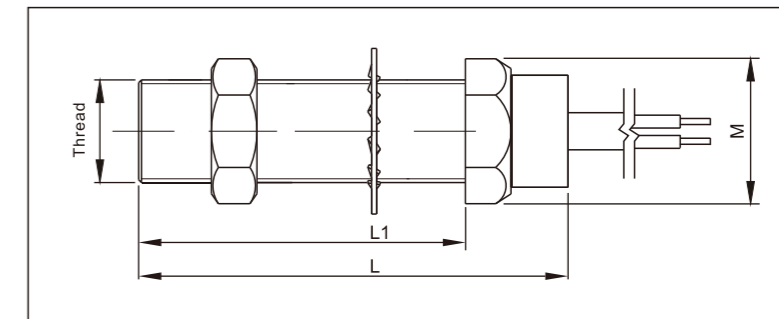
- Used for measuring gear rotation speed. Its main advantages include stable signal output, wide range of operational temperature, small size, and simple assembly process.
- It covers a wide range of measurements, including zero rotation speed.
- The shell appearance, material and thread fitting can be customized as requires.
- Protection rank: IP65

### Holzer Tacho Sensor

- Operating voltage: 8~32V with polarity protection
- Operating current: < 50mA
- Operating temperature: -40~85°C
- Output signal: Square wave
- Signal duty factor: 47±5%
- Inductance distance: ≤2mm
- Connection method: three or four wires connection

### Magnetolectric Tacho Sensor

- Operating temperature: -40~85°C
- Output signal: sine wave
- Inductance distance: ≤1mm
- Tooth module: 2~6
- Connection method: two wires connection



| Art. No. | L(mm) | L1(mm) | Thread  | M          | Output Signal | Frequency Range(Hz) | Connection  | Appearance    |
|----------|-------|--------|---------|------------|---------------|---------------------|-------------|---------------|
| KE10010  | 100   | 80     | M16×1.5 | SW19       | Sine wave     | 100-15000           | Two wires   | Nickel plated |
| KE10011  | 65    | 45     | M16×1.5 | SW19       |               |                     |             |               |
| KE10012  | 100   | 80     | UNF5/8  | SW19       | Square wave   | 0-20000             | Three wires |               |
| KE10000  | 80    | 60     | M18×1.5 | SW22       |               |                     |             |               |
| KE10001  | 80    | 70     | M18×1.5 | No hexagon |               |                     |             |               |
| KE10004  | 80    | 70     | M16×1.5 | No hexagon |               |                     |             |               |
| KE10005  | 60    | 40     | M18×1.5 | SW22       |               |                     |             |               |
| KE10006  | 80    | 70     | UNF5/8  | No hexagon |               |                     |             |               |
| KE10007  | 80    | 60     | UNF5/8  | SW19       |               |                     |             |               |

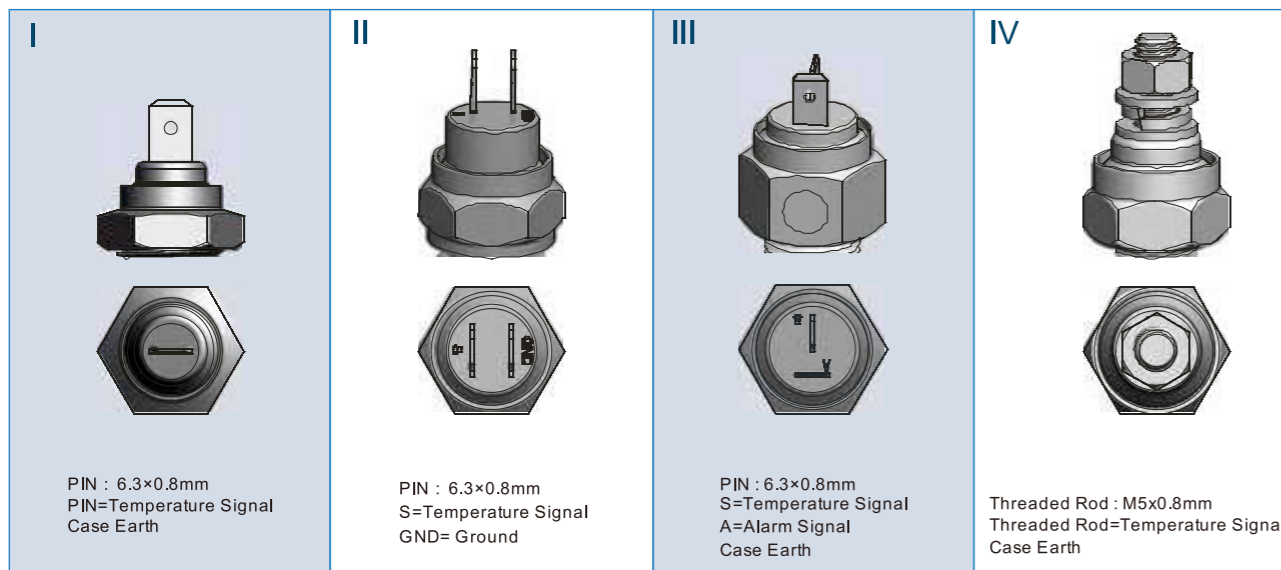
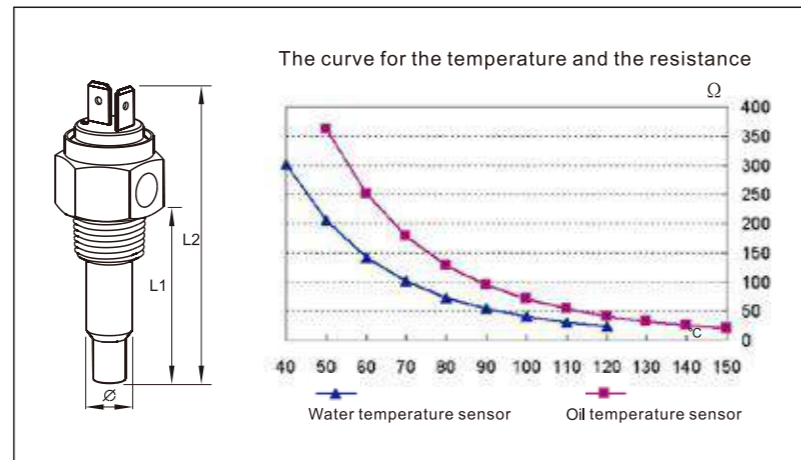
\* Please contact us for more details.

## Temp. sensor



- The main body is made of brass.
- Please refer to appendix 1 for product types (temperature sensor series)
- Sensors have double metal plate connectors.  
Eg: Type II and Type III (Type III with alarm feature)
- Protection rank: IP67

- Rated voltage: 6V~24V
- Temperature response time: Minimum 3 minutes after power supply electrified.
- Rated power for alarm switch: 1.2W~3W
- The temperature alarm tolerance:  $\pm 3^{\circ}\text{C}$
- Type of alarm touch:  
The switch turns off when the temperature rises.



## Oil temperature sensors

| Art. No. | Product Name | Temperature Max(°C) | Alarm Temp.(°C) | Thread Spec. | L1(mm) | L2(mm) | Type |
|----------|--------------|---------------------|-----------------|--------------|--------|--------|------|
| KE01001  | SON-1        | 150                 | —               | M14×1.0      | 28.5   | 51     | I    |
| KE01000  | SON-1        | 150                 | —               | M14×1.25     | 28.5   | 51     |      |
| KE01002  | SON-1        | 150                 | —               | M14×1.5      | 28.5   | 51     |      |
| KE01003  | SON-1        | 150                 | —               | M16×1.5      | 28.5   | 51     |      |
| KE01004  | SON-1        | 150                 | —               | M18×1.5      | 28.5   | 51     |      |
| KE01005  | SON-1        | 150                 | —               | 1/4"-18NPT   | 28.5   | 51     |      |
| KE01006  | SON-1        | 150                 | —               | 1/8"-27NPT   | 28.5   | 51     |      |
| KE01007  | SON-1        | 150                 | —               | 3/8"-18NPT   | 28.5   | 51     |      |
| KE01008  | SON-1        | 150                 | —               | 1/2"-14NPT   | 28.5   | 51     |      |
| KE01009  | SON-1        | 150                 | —               | 5/8"-18UNF   | 28.5   | 51     |      |
| KE01013  | SON-2        | 150                 | —               | M16×1.5      | 28.5   | 58.7   | II   |
| KE01017  | SON-2        | 150                 | —               | 3/8"-18NPT   | 28.5   | 58.7   |      |
| KE01014  | SON-2        | 150                 | —               | M18×1.5      | 28.5   | 58.7   |      |
| KE01018  | SON-2        | 150                 | —               | 5/8"-18UNF   | 28.5   | 58.7   |      |
| KE01012  | SON-2        | 150                 | —               | M14×1.5      | 28.5   | 58.7   |      |
| KE01016  | SON-2        | 150                 | —               | 1/2"-14NPT   | 28.5   | 58.7   |      |
| KE01019  | SON-2        | 150                 | —               | R3/8"-19     | 28.5   | 58.7   |      |
| KE01020  | SON-2        | 150                 | —               | M22×1.5      | 28.5   | 58.7   |      |
| KE01102  | SOA-3        | 150                 | 120             | M14×1.0      | 41     | 71.5   | III  |
| KE01103  | SOA-3        | 150                 | 120             | M14×1.25     | 41     | 71.5   |      |
| KE01104  | SOA-3        | 150                 | 120             | M14×1.5      | 41     | 71.5   |      |
| KE01105  | SOA-3        | 150                 | 120             | M16×1.5      | 41     | 71.5   |      |
| KE01106  | SOA-3        | 150                 | 120             | M18×1.5      | 41     | 71.5   |      |
| KE01107  | SOA-3        | 150                 | 120             | M16×1.5      | 41     | 71.5   |      |
| KE01108  | SOA-3        | 150                 | 120             | 1/2"-14NPT   | 41     | 71.5   |      |
| KE01101  | SOA-3        | 150                 | 120             | 3/8"-18NPT   | 41     | 71.5   |      |
| KE01100  | SOA-3        | 150                 | 120             | 5/8"-18UNF   | 41     | 71.5   |      |
| KE01109  | SOA-3        | 150                 | 120             | M20×1.5      | 41     | 71.5   |      |
| KE01110  | SOA-3        | 150                 | 115             | 1/2"-14NPT   | 41     | 71.5   |      |
| KE01023  | SOA-3        | 150                 | 105             | M12×1.25     | 41     | 71.5   |      |
| KE01111  | SOA-3        | 150                 | 80              | M14×1.5      | 41     | 71.5   |      |
| KE01112  | SOA-3        | 150                 | 120             | 1/4"-18NPT   | 41     | 71.5   |      |
| KE01113  | SOA-3        | 150                 | 120             | M22×1.5      | 30     | 68.5   |      |
| KE01114  | SOA-3        | 150                 | 135             | M16×1.5      | 41     | 71.5   |      |
| KE01115  | SOA-3        | 150                 | 100             | M14×1.0      | 41     | 71.5   |      |

\* Please contact us for more details.

## Water temperature sensors

| Art. No. | Product Name | Temperature Max(°C) | Alarm Temp.(°C) | Thread Spec. | Ømm  | L1(mm) | L2(mm) | Type |
|----------|--------------|---------------------|-----------------|--------------|------|--------|--------|------|
| KE00000  | SWN-1        | 120                 | —               | M14×1.0      | 7.5  | 28.5   | 51     | I    |
| KE00001  | SWN-1        | 120                 | —               | M14×1.25     | 7.5  | 28.5   | 51     |      |
| KE00002  | SWN-1        | 120                 | —               | M14×1.5      | 7.5  | 28.5   | 51     |      |
| KE00003  | SWN-1        | 120                 | —               | M16×1.5      | 7.5  | 28.5   | 51     |      |
| KE00004  | SWN-1        | 120                 | —               | M18×1.5      | 7.5  | 28.5   | 51     |      |
| KE00005  | SWN-1        | 120                 | —               | 1/4"-18NPT   | 7.5  | 28.5   | 51     |      |
| KE00006  | SWN-1        | 120                 | —               | 1/8"-27NPT   | 7.5  | 28.5   | 51     |      |
| KE00007  | SWN-1        | 120                 | —               | 3/8"-18NPT   | 7.5  | 28.5   | 51     |      |
| KE00009  | SWN-1        | 120                 | —               | 5/8"-18UNF   | 7.5  | 28.5   | 51     |      |
| KE00025  | SWN-1        | 120                 | —               | 1/2"-14BSP   | 7.5  | 28.5   | 51     |      |
| KE00035  | SWN-1        | 120                 | —               | M10×1.0      | 7.5  | 28.5   | 51     |      |
| KE00038  | SWN-1        | 120                 | —               | M16×1.5      | 7.5  | 22     | 44.5   |      |
| KE00017  | SWN-2        | 120                 | —               | M16×1.5      | 13   | 28.5   | 58.7   | II   |
| KE00021  | SWN-2        | 120                 | —               | 3/8"-18NPT   | 13   | 28.5   | 58.7   |      |
| KE00018  | SWN-2        | 120                 | —               | M18×1.5      | 13   | 28.5   | 58.7   |      |
| KE00022  | SWN-2        | 120                 | —               | 5/8"-18UNF   | 13   | 28.5   | 58.7   |      |
| KE00016  | SWN-2        | 120                 | —               | M14×1.5      | 13   | 28.5   | 58.7   |      |
| KE00020  | SWN-2        | 120                 | —               | 1/2"-14NPT   | 13   | 28.5   | 58.7   |      |
| KE00036  | SWN-2        | 120                 | —               | 1/4"-18NPTF  | 13   | 28.5   | 58.7   |      |
| KE00023  | SWN-2        | 120                 | —               | M20×1.5      | 13   | 28.5   | 58.7   |      |
| KE00100  | SWA-3        | 120                 | 95              | M14×1.0      | 10.7 | 41     | 71.5   | III  |
| KE00101  | SWA-3        | 120                 | 95              | M14×1.25     | 10.7 | 41     | 71.5   |      |
| KE00102  | SWA-3        | 120                 | 95              | M14×1.5      | 10.7 | 41     | 71.5   |      |
| KE00119  | SWA-3        | 120                 | 107             | M16×1.5      | 10.7 | 41     | 71.5   |      |
| KE00122  | SWA-3        | 120                 | 98              | M18×1.5      | 10.7 | 41     | 71.5   |      |
| KE00105  | SWA-3        | 120                 | 98              | 3/8"-18NPT   | 10.7 | 41     | 71.5   |      |
| KE00133  | SWA-3        | 120                 | 103             | 5/8"-18UNF   | 10.7 | 41     | 71.5   |      |
| KE00148  | SWA-3        | 120                 | 108             | R3/8"-19     | 10.7 | 30     | 68.5   |      |
| KE00170  | SWA-3        | 120                 | 110             | 1/2"-14NPT   | 10.7 | 30     | 68.5   |      |
| KE00112  | SWA-3        | 120                 | 95              | M16×1.5      | 10.7 | 41     | 71.5   |      |
| KE00106  | SWA-3        | 120                 | 95              | M18×1.5      | 10.7 | 41     | 71.5   |      |

| Art. No. | Product Name | Temperature Max(°C) | Alarm Temp.(°C) | Thread Spec. | Ømm  | L1(mm) | L2(mm) | Type |
|----------|--------------|---------------------|-----------------|--------------|------|--------|--------|------|
| KE00108  | SWA-3        | 120                 | 95              | 1/2"-14NPT   | 10.7 | 41     | 71.5   | III  |
| KE00103  | SWA-3        | 120                 | 95              | 3/8"-18NPT   | 10.7 | 41     | 71.5   |      |
| KE00109  | SWA-3        | 120                 | 95              | 5/8"-18UNF   | 10.7 | 41     | 71.5   |      |
| KE00113  | SWA-3        | 120                 | 98              | M14×1.0      | 10.7 | 41     | 71.5   |      |
| KE00114  | SWA-3        | 120                 | 98              | M14×1.25     | 10.7 | 41     | 71.5   |      |
| KE00120  | SWA-3        | 120                 | 98              | M14×1.5      | 10.7 | 41     | 71.5   |      |
| KE00121  | SWA-3        | 120                 | 98              | M16×1.5      | 10.7 | 41     | 71.5   |      |
| KE00124  | SWA-3        | 120                 | 98              | 1/2"-14NPT   | 10.7 | 41     | 71.5   |      |
| KE00125  | SWA-3        | 120                 | 98              | 5/8"18UNF    | 10.7 | 41     | 71.5   |      |
| KE00149  | SWA-3        | 120                 | 102             | 5/8"18UNF    | 10.7 | 30     | 68.5   |      |
| KE00115  | SWA-3        | 120                 | 98              | 1/2"-14NPT   | 10.7 | 41     | 71.5   |      |
| KE00116  | SWA-3        | 120                 | 95              | M12×1.25     | 10.7 | 41     | 71.5   |      |
| KE00140  | SWA-3        | 120                 | 110             | M16×1.5      | 10.7 | 30     | 68.5   |      |
| KE00141  | SWA-3        | 120                 | 105             | 3/8"-18NPT   | 10.7 | 41     | 71.5   |      |
| KE00143  | SWA-3        | 120                 | 100             | M14×1.5      | 10.7 | 41     | 71.5   |      |
| KE00152  | SWA-3        | 120                 | 99              | 1/2"-14NPT   | 10.7 | 41     | 71.5   |      |
| KE00153  | SWA-3        | 120                 | 99              | 3/8"-18NPT   | 10.7 | 41     | 71.5   |      |
| KE00156  | SWA-3        | 120                 | 100             | 1/2"-14NPT   | 10.7 | 41     | 71.5   |      |
| KE00160  | SWA-3        | 120                 | 98              | 3/8"-18NPT   | 10.7 | 30     | 68.5   |      |
| KE00161  | SWA-3        | 120                 | 98              | M16×1.5      | 10.7 | 30     | 68.5   |      |
| KE00163  | SWA-3        | 120                 | 110             | 1/2"-14NPT   | 10.7 | 41     | 71.5   |      |
| KE00164  | SWA-3        | 120                 | 110             | 3/8"-18NPT   | 10.7 | 41     | 71.5   |      |
| KE00165  | SWA-3        | 120                 | 98              | 1/2"-14NPT   | 10.7 | 30     | 68.5   |      |
| KE00166  | SWA-3        | 120                 | 98              | 1/4"-18NPT   | 10.7 | 41     | 71.5   |      |
| KE00169  | SWA-3        | 120                 | 98              | 3/8"-18R     | 10.7 | 41     | 71.5   |      |
| KE00010  | SWN-1        | 120                 | —               | 1/2"-14NPT   | 8    | 30     | 54     | IV   |
| KE00011  | SWN-1        | 120                 | —               | 1/8"-27NPT   | 8    | 27     | 51.5   |      |
| KE00012  | SWN-1        | 120                 | —               | 1/4"-18NPT   | 8    | 27     | 51.5   |      |
| KE00027  | SWN-1        | 120                 | —               | 1/2"-14BSP   | 8    | 30     | 54     |      |
| KE00013  | SWN-1        | 120                 | —               | 3/8"-18NPT   | 8    | 22     | 46.5   |      |
| KE00030  | SWN-1        | 120                 | —               | M10×1.0      | 8    | 27     | 51.5   |      |
| KE00039  | SWN-1        | 120                 | —               | M16×1.5      | 8    | 22     | 46.5   |      |

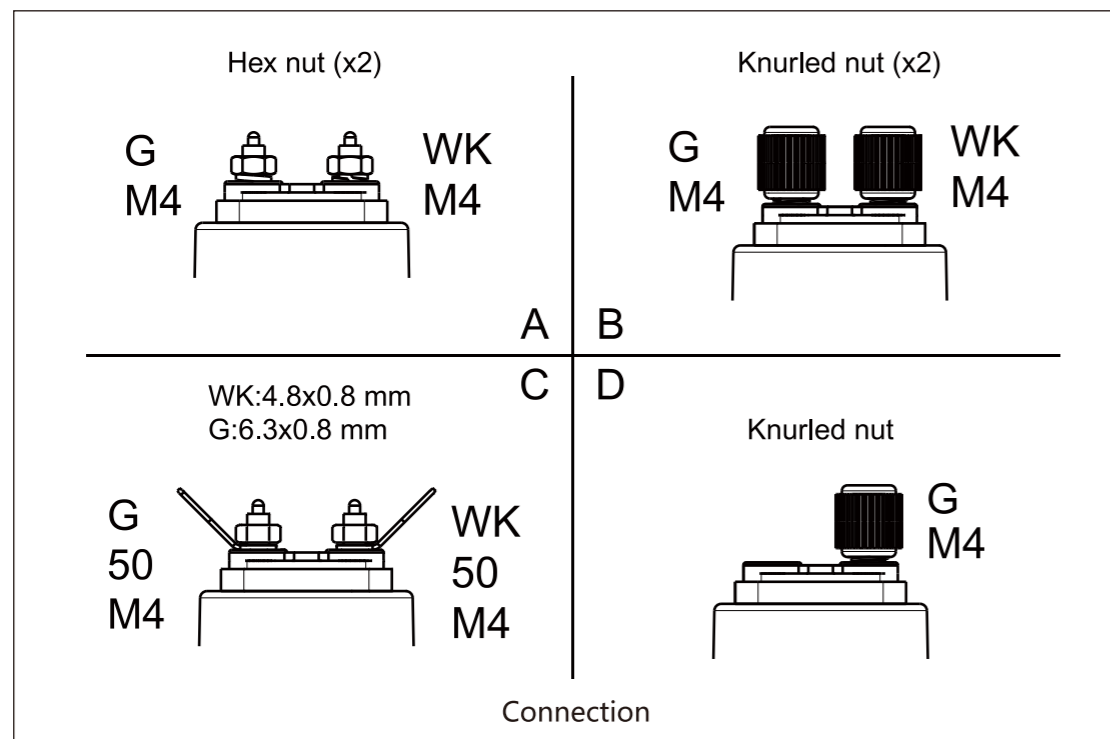
\* Please contact us for more details.

## Pressure sensor (mechanical)

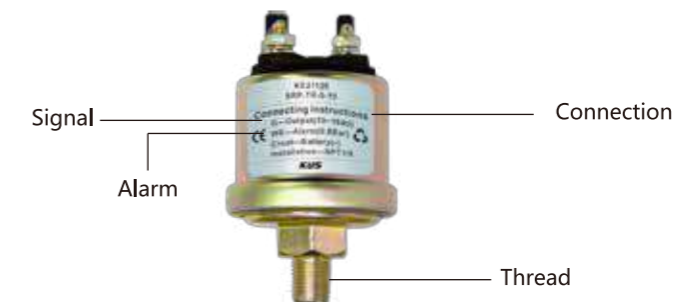


- It combines the advantages of excellent anti-vibration performance, long service life, simple assembly process, stable quality, wide range of operating temperature, etc.
- It is largely applied to many fields, such as the engine pipe of vehicles and ships, water processing projects, inspection and control of industrial processes, hydraulic and pneumatic control projects, etc.
- Protection rank: IP66

- Operating voltage: 6~24V
- Conducting power: < 5W
- Operating temperature: -25 ~120°C(120°C MAX 1H)
- Measuring range: 0~5Bar or 0~10Bar
- Alarm: 0.8Bar or 1.4Bar
- Output signal: Standard resistance value: 10~184Ω
- Thread fitting: NPT1/4、NPT1/8、M10、M10X1 or customized as requires.



| Art. No. | Thread  | Measuring Range(Bar) | Output(Ω) | Alarm(Bar) | Connection | Appearance        |
|----------|---------|----------------------|-----------|------------|------------|-------------------|
| KE21102  | NPT1/8  | 0-5                  | 10-184    | 0.8±0.2    | A          | Color zinc plated |
| KE21100  | NPT1/8  | 0-10                 | 10-184    | 0.8±0.2    |            |                   |
| KE21101  | NPT1/4  | 0-10                 | 10-184    | 0.8±0.2    |            |                   |
| KE21047  | NPT1/4  | 0-10                 | 10-184    | 1.4±0.3    |            |                   |
| KE21015  | UNF 3/8 | 0-10                 | 10-184    | No         |            |                   |
| KE21109  | M10*1   | 0-10                 | 10-184    | 1.4±0.2    |            |                   |
| KE21104  | NPT1/8  | 0-5                  | 10-184    | 0.8±0.2    | B          |                   |
| KE21010  | NPT1/8  | 0-5                  | 10-184    | NO         |            |                   |
| KE21112  | NPT1/4  | 0-5                  | 10-184    | 0.8±0.2    |            |                   |
| KE21121  | M10*1   | 0-5                  | 10-184    | 1.4±0.2    |            |                   |
| KE21134  | R1/8    | 0-5                  | 10-184    | 0.8±0.2    |            |                   |
| KE21103  | NPT1/8  | 0-10                 | 10-184    | 0.8±0.2    |            |                   |
| KE21107  | M10*1   | 0-10                 | 10-184    | 1.4±0.2    |            |                   |
| KE21111  | NPT1/4  | 0-10                 | 10-184    | 0.8±0.2    |            |                   |
| KE21006  | PT 1/8  | 0-10                 | 10-184    | No         |            |                   |
| KE21123  | M14*1.5 | 0-10                 | 10-184    | 0.8±0.2    |            |                   |
| KE21126  | R1/8    | 0-10                 | 10-184    | 0.4±0.2    |            |                   |
| KE21017  | NPT1/8  | 0-10                 | 240-33    | NO         | C          |                   |
| KE21124  | NPT1/8  | 0-10                 | 10-184    | 0.5±0.2    |            |                   |
| KE21142  | NPT1/8  | 0-10                 | 10-192    | 0.8±0.2    |            |                   |
| KE21120  | NPT1/8  | 0-10                 | 10-184    | 0.8±0.2    | D          |                   |
| KE21005  | NPT1/8  | 0-5                  | 10-184    | No         |            |                   |
| KE21152  | BSP-1/8 | 0-10                 | 10-184    | No         |            |                   |



\* Please contact us for more details.

## The next generation of SCR technology for NOx reduction



The International Maritime Organization (IMO) has regulated NOx emissions from marine vessels in order to reduce air pollution caused by NOx. The IMO's Tier III standards require that marine vessels setting sail in 2016 or later reduce NOx emissions by 80 % relative to 2010 levels.

In order to comply with the strict standard, SCR (selective catalytic reduction, SCR) is to reduce marine diesel exhaust nitrogen oxide content of mainstream technology. SCR meets IMO Tier III standards and beyond by consistently removing 95% or more of NOx in the exhaust gas of a marine engine.

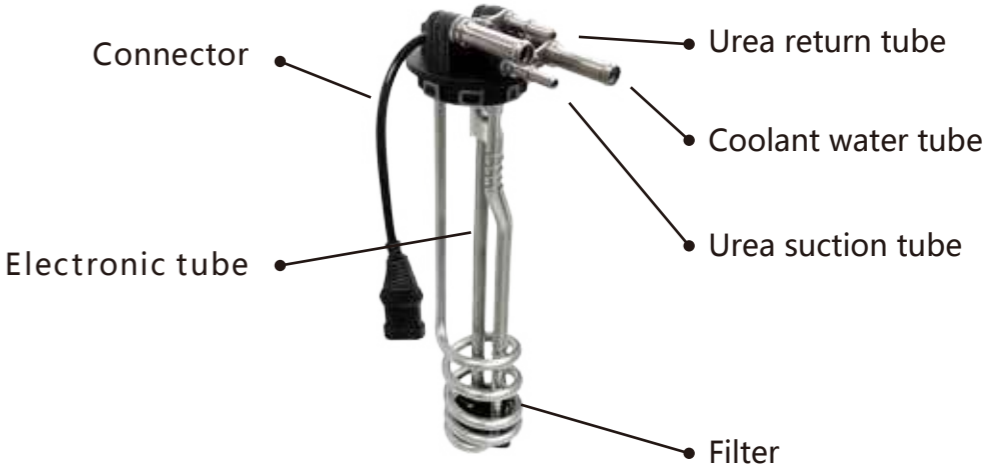
SCR system operation needs to consume urea solution as a reducing agent, in order to ensure the normal operation of marine SCR system, usually set up a separate urea solution tank for storing urea solution, and also need one urea sensor to be combined with this urea tank for level detecting, temperature measurement, suction and return of urea solution, impurities filtration and others functions.

KUS is the world's leading manufacturer of urea tank and urea sensors. Our urea sensors and urea tank are widely used in SCR equipped vehicles all over the world. We can supply OEM and ODM service for SCR system of marine diesel engines.



### Benefits of our sensors

- Signal output with high precision
- Resistant to environmental variations
- Integrated key features
- Extended operation lifetime
- Selectable length subject to users' application
- Options of different electronics connectors
- Custom design formation optimized for different tank design



### ■ Urea sensors with Multi-functions



### ■ Urea sensors with single tube





Control panel (High version)



Control panel (Mid version)



Control box (AC\DC optional)



Control box (DC available)



Control panel (Standard version) (Pointer/Digital Gauge optional)



Fuel level sensor

NEW

## Control panel (High version)



- Product feature
  - High integration
  - Excellent electromagnetic compatibility
  - Input overvoltage protection
  - Power overcurrent protection
  - 12-way power output with short circuit diagnosis
  - 8-way sensor input
  - 6-way switch input
  - LCD with high resolution
- Product specification
  - Display screen size : 207 \* 134.4 \* 50.1mm
  - Control box size : 37\*117\*45mm
  - Working voltage : 9-16V
  - Working temperature : -40~85°C
  - Storage temperature : -40~90°C
  - Relative humidity : 5%~90%
  - Air pressure : 86kPa~106kPa

## Control panel (Mid version)

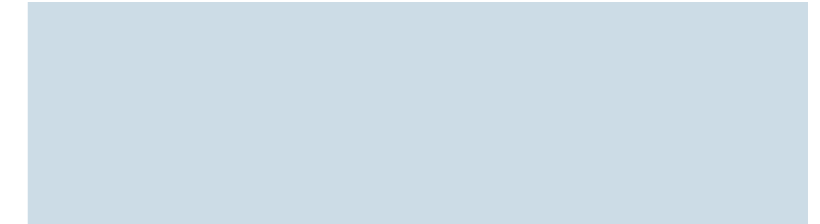


- Product feature
  - High integration
  - Excellent electromagnetic compatibility
  - Input overvoltage protection
  - Power overcurrent protection
  - 8-way power output with short circuit diagnosis
  - 4-way sensor input
  - 4-way switch input
  - LCD with high resolution
- Product specification
  - Display screen size : 205\*91\*50mm
  - Control box size : 237\*117\*45mm
  - Working voltage : 9-16V
  - Working temperature : -40~85°C
  - Storage temperature : -40~90°C
  - Relative humidity : 5%~90%
  - Air pressure : 86kPa~106kPa

## Control panel (Standard version)



- Product feature
  - 5min protection for reverse connection
  - 60min protection for overvoltage
  - 8-Way control switch power output, reach 20A/each circuit
  - Integrated with 8 current protectors
  - Integrated with Waste Gauge, Grey Water Gauge, Voltmeter (Customized requirement be allowed)
  - Simple installation
  - High cost performance
- Product specification
  - Display screen size : 290\*180mm
  - Working voltage : 9-16V DC
  - Working current : ≤200mA
  - Resistant to high voltage : 500V, 1S
  - Operation method : Rocker switch
  - Working temperature : -30°C ~ +65°C
  - Storage temperature : -30°C ~ +80°C





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## **KUS**

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